



KF-4343



ORDER NO. CRT 1143

UC

US

CASSETTE CAR STEREO WITH FM/AM ELECTRONIC TUNER

KE-3525 us KE-3333 us KE-2323 us

Note:

 See the separate manual CX-166 (CRT1094) for the cassette mechanism description.

CONTENTS

1.	SPECIFICATIONS 1	
2.	USING THE RADIO1	
3.	SETTING THE TIME2	
4.	USING THE TAPE DECK 3	
5.	CONNECTIONS 4	
6.	DISASSEMBLY 5	
7.	ADJUSTMENT 7	
8.	SCHEMATIC CIRCUIT DIAGRAM (KE-4343) 16	
9.	CONNECTION DIAGRAM (KE-4343) 20	
10.	SCHEMATIC CIRCUIT DIAGRAM	
	(KE-3525, KE-3333)24	

11	CONNECTION DIAGRAM	
	(KE-3525, KE-3333)	28
12.	SCHEMATIC CIRCUIT DIAGRAM (KE-2323)	
13.	CONNECTION DIAGRAM (KE-2323)	36
14.	EXPLODED VIEW	40
15.	CASSETTE MECHANISM ASSY	
	EXPLODED VIEW	44
16.	ELECTRICAL PARTS LIST	47
17.	PACKING METHOD	51

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1. SPECIFICATIONS

General
Power source 14.4 V DC (10.8 – 15.6 V allowable)
Grounding system Negative type
Max. current consumption
(KE-4343, KE-3525, KE-3333) 2.5 A (KE-2323) 1.8 A
Dimensions (chassis)
$[6-3/4(W) \times 2(H) \times 5-1/8(D) \text{ in.}]$
(nose)
$[4-1/8(W) \times 1-5/8(H) \times 1-3/8(D) \text{ in.}]$
Shaft interval
Weight
Amplifier (KE-4343, KE-3525, KE-3333)
Continuous power output is 3.2 W per channel min. into 4 ohms,
both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output
Load impedance
Preout output level/impedance
Tone controls (bass)
(treble)
Loudness contour +8 dB (100 Hz) (volume: -30 dB)
Amplifier (KE-2323)
Continuous power output is 3.2 W per channel min. into 4 ohms,
both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output 8.5 W × 2 (EIAJ)
Load impedance 4 Ω (2 – 8 Ω allowable)
Preout output level/Impedance (RCA) 500 mV/100 Ω
Loudness contour +8 dB (100 Hz) (volume: -30 dB)

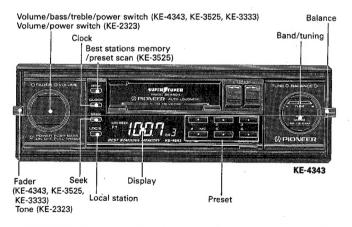
Tape player Tape
Frequency response
Stereo separation
FM tuner
Frequency range 87.9 — 107.9 MHz
Usable sensitivity
50 dB quieting sensitivity 17 dBf (1.9 μ V/75 Ω , mono)
Signal-to-noise ratio
Distortion 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response 50 $-$ 15,000 Hz (\pm 3 dB)
Stereo separation
Selectivity 70 dB (2ACA) (±400 kHz)
AM tuner
Frequency range 530 — 1,620 kHz
Usable sensitivity
Selectivity 50 dB (±10 kHz)

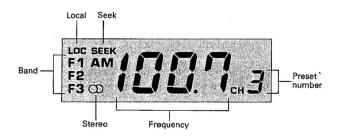
These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Note:

Specifications and the design are subject to possible modification without notice due to improvements.

2. USING THE RADIO





Before attempting operation...

- Set the fader control to the left horizontal. (KE-4343, KE-3525, KE-3333)
- Since the set is designed preferentially for tape play, eject a cassette tape, if mounted, before operating the radio.
- Turning the power switch to the right causes power to switch ON and the current frequency to appear on the display.
- 2. Press the band switch to select the band.
- Press the seek button and the seek tuning indicator will be displayed.
- 4. Turn the tuning knob to the left or right to tune in the desired frequency. (Turning to the right will increase the frequency.)
- 5. Adjust the volume and balance.

KE-4343, KE-3333

Adjust the tone to the desired position. To adjust bass, turn the volume knob while pressing it. For treble, turn the volume knob after it has been pulled out until it clicks into place. Return the volume knob after adjusting the tone.

KE-2323

6. Adjust the tone.

• To enter a frequency into the preset memory...

 Hold down one of the preset buttons (1 - 6) for approximately two seconds. The frequency is stored in memory (assigned to the preset button pressed) once the preset number stops flashing on the display.

Six FM1 frequencies, six FM2 frequencies, six FM3 frequencies and six AM frequencies can be entered.



Auto-Loudness

When playing back a tape or listening to the radio at low volume, the low tone is automatically emphasized.

Clock Switch

Each press causes the display to switch between clock and frequency.

Best Stations Memory Button

Automatically tunes strong frequencies and assigns them to preset buttons 1 through 6 for one-touch automatic tuning. The best stations memory function is activated by pressing this button for approximately 2 seconds. The best stations memory function is indicated by ——— flashing on the display, and this function can be canceled by pressing the band switch. Once frequencies have been assigned to the preset buttons, each one is tuned in and played for eight seconds. Finally the frequency assigned to preset button 1 is tuned in to complete the procedure.

- 6 best (strongest) frequencies are memorized in the 6 preset buttons in the order of their strength, the strongest one being assigned to preset button 1.
- The frequencies previously assigned to the preset buttons are retained when 6 frequencies cannot be located.
- The best stations memory is in operation while —— is flashing on the display.

Local Station Switch

Pressing this switch increases the seek threshold level so that only relatively strong stations can be tuned in (local indicator will illuminate on the display). Local seek threshold level can be selected among four levels for FM and two levels for AM.

Holding this switch down for approximately 2 seconds and then turning the tuning knob to the right changes the display from L-1, L-2, L-3 to L-4. Turning the tuning knob to the left changes the display from L-4, L-3, L-2 to L-1. (L-1 and L-2 for AM.) The bigger the number, the higher the seek threshold becomes and only relatively strong stations can be tuned in.

• Fader Control (KE-4343, KE-3525, KE-3333)

This control is used to adjust the balance between the front and rear speakers when using a 4-speaker system. Turning the control upwards decreases the volume of the rear speakers, while turning it downwards decreases the volume of the front speakers. With 2-speaker systems, set this control to a horizontal position.

Seek Tuning

Press the seek button, and tuning to the next higher or lower broadcast on the band can be accomplished automatically by simply turning the tuning knob to the left or right. FM frequencies change in 0.2 MHz steps while those in the AM band change in 10 kHz steps.

Preset Tuning

Pressing the preset button instantly tunes in the frequency programmed in the memory for that button.

Manual Tuning

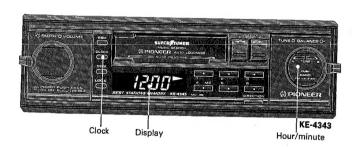
When manual tuning is employed, FM frequencies change in 0.2 MHz steps while AM frequencies change in 10 kHz steps.

- Press the seek button and the seek tuning indicator will disappear from the display.
- Change the frequency by turning the tuning knob to the left or right. Turning the knob once will change the frequency one step (see above). Holding the tuning knob in either direction will successively change the frequency at the prescribed step.

Preset Scan Tuning (KE-3525)

Pressing the preset scan button (CH indicator flashes) causes previously stored frequencies to be tuned in sequentially for eight seconds each. Press again when the desired frequency is tuned in to cancel preset scan tuning.

3. SETTING THE TIME



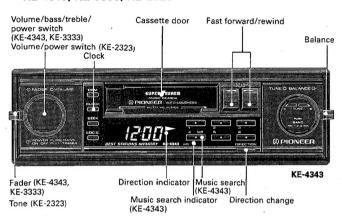
- 1. Press the clock switch to switch to the time display.
- Each turn of the hour/minute control knob to the left while the clock button is depressed advances the hour setting one hour, while each turn to the right advances the minute setting one minute. Holding the control knob in either position results in high speed advance of the respective setting.

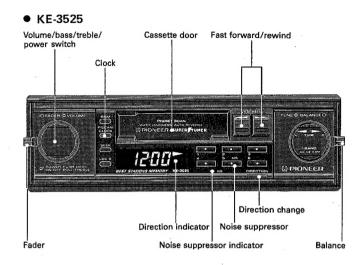




4. USING THE TAPE DECK

• KE-4343, KE-3333, KE-2323





• Before attempting operation...

- Set the fader control to the left horizontal. (KE-4343, KE-3525,
- 1. Turning the power switch to the right causes power to switch ON.
- 2. Loading a cassette tape into the load slot causes playback to begin automatically.
- Adjust the volume and balance.

KE-4343, KE-3525, KE-3333

4. Adjust the tone to the desired position. To adjust bass, turn the volume knob while pressing it. For treble, turn the volume knob after it has been pulled out until it clicks into place. Return the volume knob after adjusting the tone.

KE-2323

- 4. Adjust the tone.
- 5. When tape playback reaches the end of the tape, playback will automatically switch from the side being played to the opposite side (ie. Side A to Side B or vice versa) (Auto-reverse). To eject the tape during playback, simultaneously press the fast forward and rewind buttons.
- A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using
- such tapes or remove such labels from the cassette before attempting use. Do not try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds. KE-3525, KE-3333, KE-2323
- Be sure to eject the tape when the vehicle's ignition is turned OFF. Leaving the tape in the unit can deform the pinch roller causing wow and flutter during tape

Fast Forward/Rewind

Since the transport can be in either direction, both the left and right high-speed tape transport buttons can be regarded as fast forward/ rewind buttons.

For fast forward, press the high-speed tape transport button that corresponds to the direction that is shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the opposite side of the tape (Auto-reverse).

For rewind, press the button that is opposite that of the direction shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the beginning of the same side of the tape (Auto-replay).

Fast forward and rewind can be terminated by pressing the respective opposite high-speed tape transport button.

Direction Change Button

This button is used to switch from one side of the tape to the other (from Side A to Side B or vice versa).

Noise Suppressor Switch (KE-3525)

Press to reduce tape hiss.

Music Search (KE-4343)

• Returning to the beginning of selection A

Press the music search button and then the high-speed tape transport button for the direction opposite that shown by the direction indicator. Playback will automatically start from the beginning of selection A.

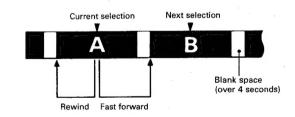
• Moving from selection A to selection B

Press the music search button and then the high-speed tape transport button that corresponds to the direction shown by the direction indicator. Playback will automatically start from the beginning of selection B.

To enable regular fast forward/rewind operations, press the music search button again to turn the function OFF. The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

■ Unrecorded "blank" portions between selections is less than 4 seconds → the blank portion cannot be detected by the unit.

- Pauses in recorded conversations are longer than 4 seconds → the unit reads these as blanks between selections.
- Portions are recorded at very low volume for more than 4 seconds -- the unit reads these as blanks between selections.



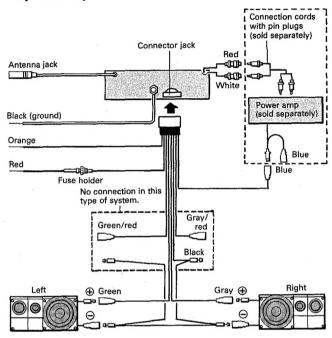
5. CONNECTIONS

Note:

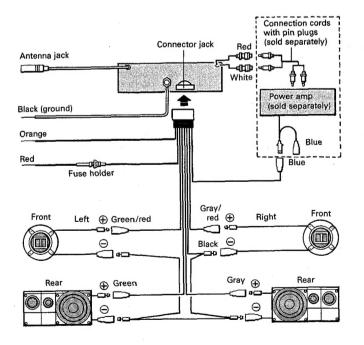
- To avoid shorts in the electrical system, be sure to disconnect the battery ⊖ cable before beginning installation.
- Replace fuses only with the types stipulated on the fuse holder.
- Be sure to properly connect the color coded leads. Failure to do so can cause malfunctions.
- Cover unused terminals with tape to prevent electrical shorts. (KE-4343, KE-3525, KE-3333)
- Refer to the power amp owner's manual when connecting a power amp (sold separately) to the pin jack. (KE-4343, KE-3525, KE-3333)

Black (ground)	To vehicle (metal) body.			
Blue	System control/Auto-antenna relay control terminal (Max. 300 mA 12 V DC).			
Orange	To terminal always supplied with power regardless of ignition switch position.			
Red	To electric terminal controlled by ignition switch (12 V DC) ON/OFF.			

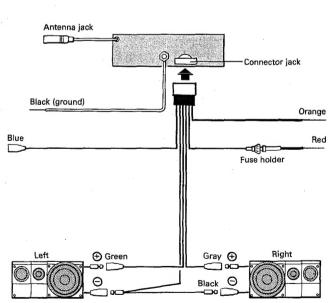
KE-4343, KE-3525, KE-3333 2-speaker system



KE-4343, KE-3525, KE-3333 4-speaker system



KE-2323





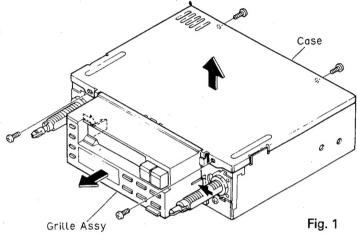
6. DISASSEMBLY

• Removing the Case

1. Remove the four screws, and then remove the case.

• Removing the Grille Assy

1. Press tabs at two locations indicated by arrows, and pull out the grille assy.



• Removing the Cassette Mechanism Assy

- 1. Disconnect the two connectors.
- 2. Remove the four screws, and then remove the cassette mechanism assy.

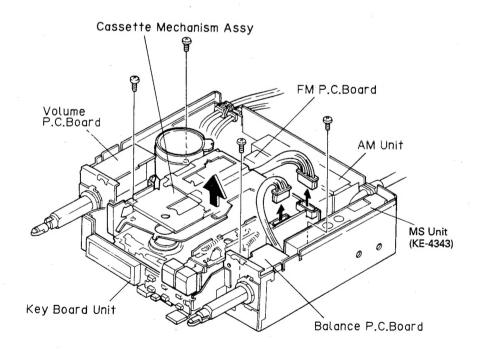


Fig. 2

• Removing the Chassis Unit

- 1. Remove the five screws.
- 2. Unbend tab until straight, and then remove the chassis unit.

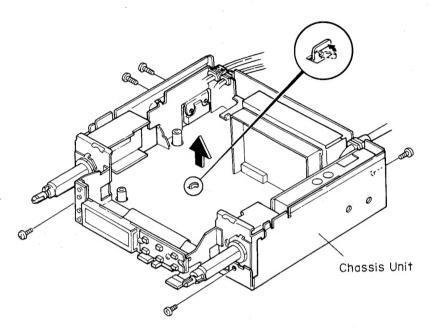
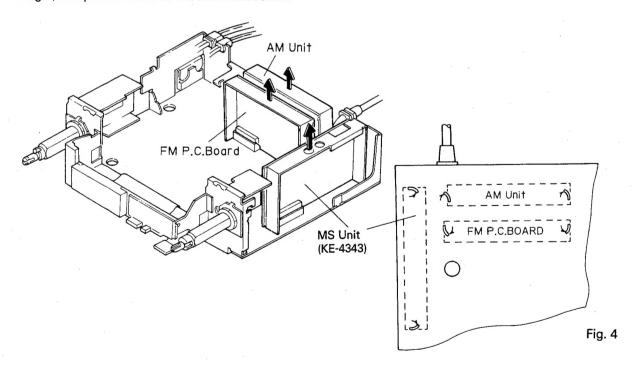


Fig. 3

Removing the AM Unit, FM P.C.Board and MS Unit

1. Unbend tabs on back of each unit circuit board until straght, and pull out units as shown in illustration.





7. ADJUSTMENT • Connection Diagram

NOTICE:

Select C1 so that total capacity of 80pF is attained from the direction of the receiver jack.

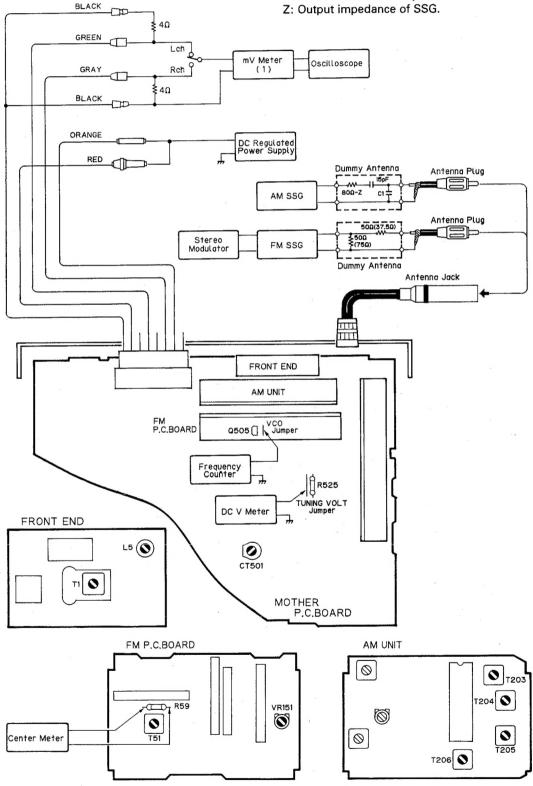


Fig. 5

7. 1 REFERRENCE OSCILLATION FREQUENCY ADJUSTMENT

No.		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
1	Set the AM mode.	1,000	СТ501	Frequency Counter: 11.71MHz±50Hz

7. 2 AM ADJUSTMENT

	No. AM SSG (400Hz, 30%)		Displayed Frequency	Adjusting Point	Adjustment Method (Switch Position)		
		Frequency (kHz)	Level (dB)	(kHz)	FOIRE	(SWITCH FOSITION)	
Track- ing	1			530		Verify that DC V Meter is more than 2V.	
	2				T203	DC V Meter:Less than 6V	
	3	1,000 20		1,000	T204, T205, T206	mV Meter(1):Maximum	

7. 3 FM ADJUSTMENT \times Stereo MOD.: 1kHz,L+R = 90%, Pilot = 10%

	No.	No. FM SSG (400Hz, 100%)		Displayed	Adjusting Point	Adjustment Method (Switch Position)		
		Frequency (MHz)	Level (dB)	Frequency (MHz)	POINT	(SWITCH FOSITION)		
IF	1	98.1	60	98.1	T51	Center Meter:0		
Track-	1	100 100 100 100 100 100 100 100 100 100		107.9	L5	DC V Meter:Less than 7.4V		
ing	2			87.9		DC V Meter:More than 0.7V		
	3	98.1	5 — 10	98.1	T1	mV Meter(1):Maximum		
Auto Level	1	98.1%	35	98.1	VR151	mV Meter(1):Separation 5dB		



• ICs and Transistors

2SD667



2SC2026 2SC2498



2SA608SP 2SA1048 2SA1150 2SC1740S 2SC2458 2SC3113



2SC3623A



2SD1859



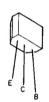
2SC3311A



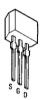
2SK435



2SA933S 2SC536SP 2SD1468S



2SJ105



DTA114YS
DTC124ES
DTC143TS

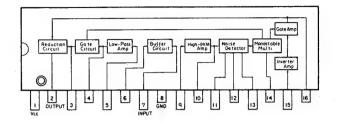
DTA114YS

DTC124ES

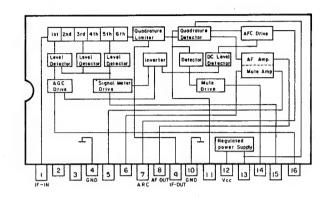
DTC143TS

DTC143TS

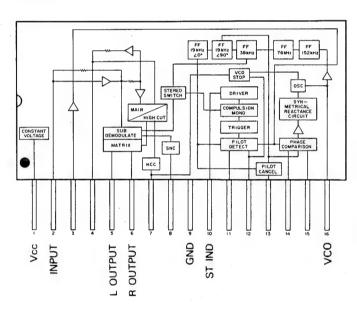
LA2110



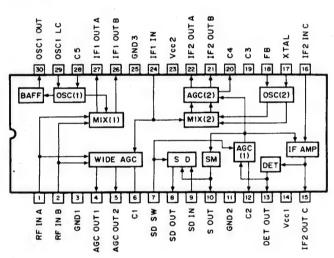
LA1140B



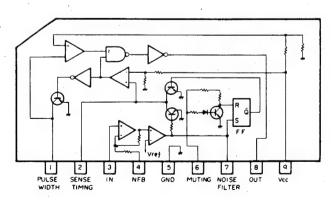
LA3430P



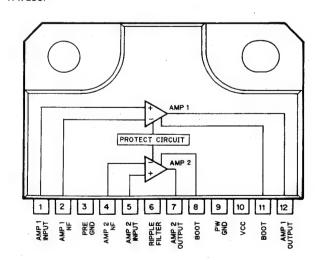
PA4010



PA0011

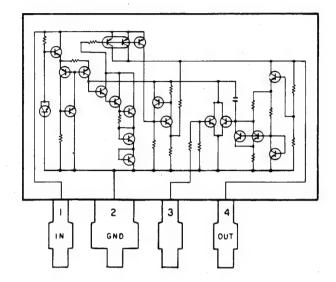


TA7280P

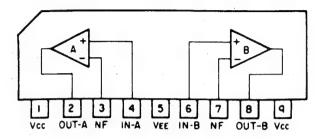


KE-4343

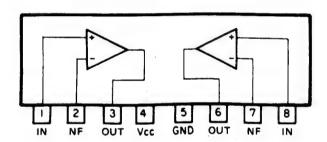
AN6540



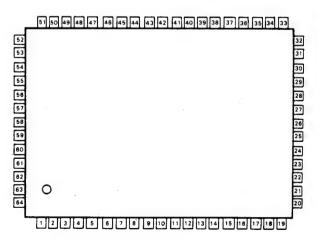
TA75558S



M51522AL



*PD4132



IC's marked by * are MOS type. Be careful in handling them because they are very liable to be damaged by electrostatic induction.

• Pin Function (PD4132)

Pin No.	Pin Name	I/0	Function and Operation
1	NC		No connected to internal chips.
2 3	E01 E02	Output	PLL error output. H level output by these terminals when divivision of local oscillator frequency (VCO output) is higher than reference frequency. L level output when lower, this output is applied to a varactor diode, via an external low pass filter. E01 and E02 output identical waveforms.
4 8	GND GND		Ground terminal
5	AM	Input	AM VCO input Inputs 0.6-15MHz(0.3Vp-p MIN) local oscillator reference frequency (VCO output). This terminal is active when direct division system is selected.
6	FM	Input	FM VCO input Inputs 15-150MHz(0.5Vp-p MIN) local oscillator reference frequency (VCO output). This terminal is active when swallow counter method is selected.
7	CE	Input	Chip Enable Device selector signal input. H level during normal device operation, L level when deivce is not being used. PLL is disable status while this terminal is L level. For models without clocks, internal clock and CPU operation is halted while this terminal is L level, and memory is maintained by low demand current(10 μ A MAX). Change of CE terminal from L to H results in device reset and the program to start from address 0.
9	FM/AM (DIRC- HG)	Output	TAPE MODE(TAPE 14 pin "H") Each time the DIRECTION button is pressed, this pin output the signal shown in the following timing chart.
			FM/AM (DIRCHG)
			MUTE (Pin 20) 160ms 340-465ms 45-50ms
	-		TUNER MODE (TAPE 14 pin "L") When the tape input pin (pin 14) is low(i.e., the tuner is selected), pin 9 control the power of the FM and AM circuits. The output of this pin is determined as follows: "H":FM ON "L":AM ON
10	SEEK	Output	Tuner SEEK output. "L":SEEK, BSM, and P. SCAN

Pin No.	Pin Name	1/0			Function an	d Operatio	on			
11 21	LOCL LOCH	Output Output	TUNER M	TUNER MODE (TAPE 14 pin "L") Halt sensitivity switching terminals controlled by LOC and BSM keys.						
	(MS)			DX - SEEK (PSCN)	LOC. SEEK	BSM-L	BSM-M	BSM-H		
			LOCL	L	Н	L	Н	Н		
			LOCH	L	L	L	L	Н		
				During broadcas	st reception					
	-		LOCL	L	-					
			LOCH	L						
			TAPE MO	DE(TAPE 14 pin * n 21 "H":	'H") MS ON "L":M	S OFF				
12	SD	Input		whether or not a						
13	ST	Input	input s Display	Inputs stereo broardcast detection signal. Stereo is detected when input signal is L level, and "Stereo" indicator is displayed. Display is cleared when input signal is at H level. "Stereo" indicator is off during mute signal output.						
14	ТАРЕ	Input	clock s	Tape signal input used to change the display modes depending on the clock switch setting. If this pin is set to a high level, the display indicates the tape motion. When this pin is high, the pressing of the clock button causes the following actions:						
				Blank display			clock but display	ton		
		-			. 1	Pressing	clock but	ton		
				is pin is low,thactions:	ne pressing o	f the cloc	k button o	causes the foll-		
				Frequency disp	olay —		clock but display	ton		
				:	<u> </u>	Pressing	clock but	ton		
15	IF OFF SET	Input	Not use	ed.						

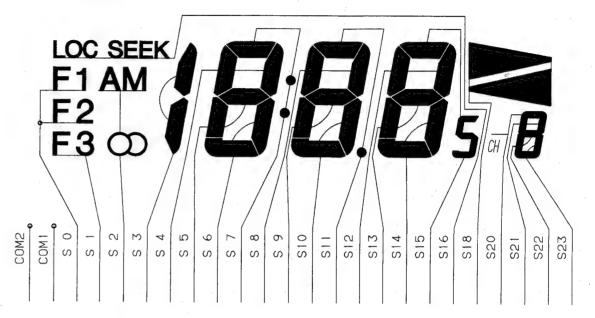
B

C

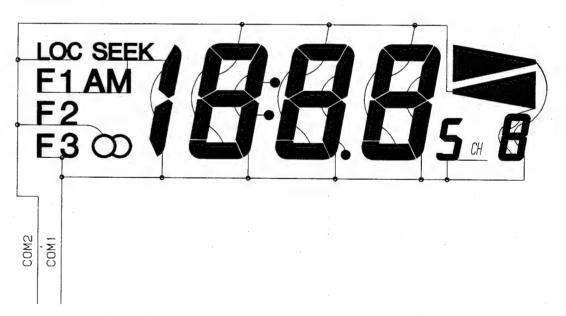
Pin No.	Pin Name	1/0	Function and Operation
16	AM IF	Input	AM band IF counter input terminal. Used for broadcast detection in AM band auto tuning.
17	F/R	Input	When the tape input(pin14) is high, this pin accepts a tape motion signal. When this is H level the ">"(FWD) indicator lights; when L level, the " < "(REV) indicator.
18 19	KST4 KST5	Output Output	Key return signal source output.
20	MUTE	Output	This muting output terminal, set to active low, eliminates the shock noise when the PLL lock is disengaged.
22	NS	Output	NS(Noise Supprssor) ON/OFF output terminal. While the deck is in operation, the contents of "NS ON/OFF memory" is output from this pin. This pin goes H level when NS is on. (KE-3525)
23	B/C	Output	Not used.
24 25	X0 XI	Output Input	Quartz oscillator connection terminal. 4.5MHz quartz crystal used.
26 58	VDD VDD		Device power supply terminal. 5V $\pm 10\%$ voltage supplied.
27	METAL	Output	Each time the METAL button is pressed, this pin alternates between H and L levels, switching the METAL indicator on and off. "H":METAL "L":NORMAL
28 31	KST3 KST0	Output	Key return signal source output
32 55	\$23 \$0	Output	Segment signal output terminal to LCD. LCD display performed using COM1, COM2 matrices.
56 57	COM1 COM2	Output Output	Common signal terminal to LCD. GND, 1/2VDD, VDD values (5ms interval) output at 100Hz cycle. Segments between these terminals and SO-S23 with \pm VDD potential difference are lit.
59 62	K3 	Input	Key matrix input.
63	SL	Input	Station level analog voltage input.
64	INT	Input	Not used.

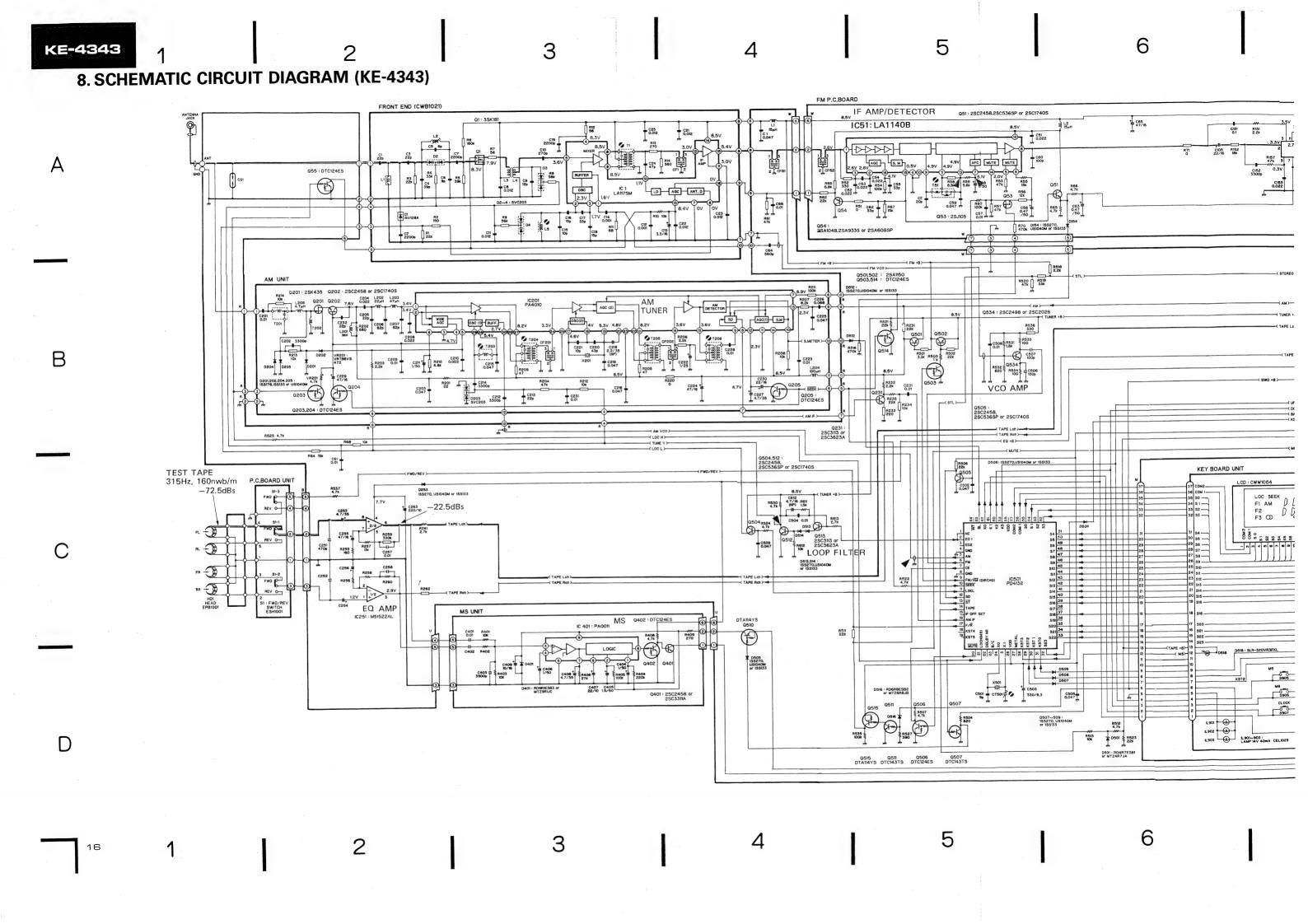
LCD (CWW1054)

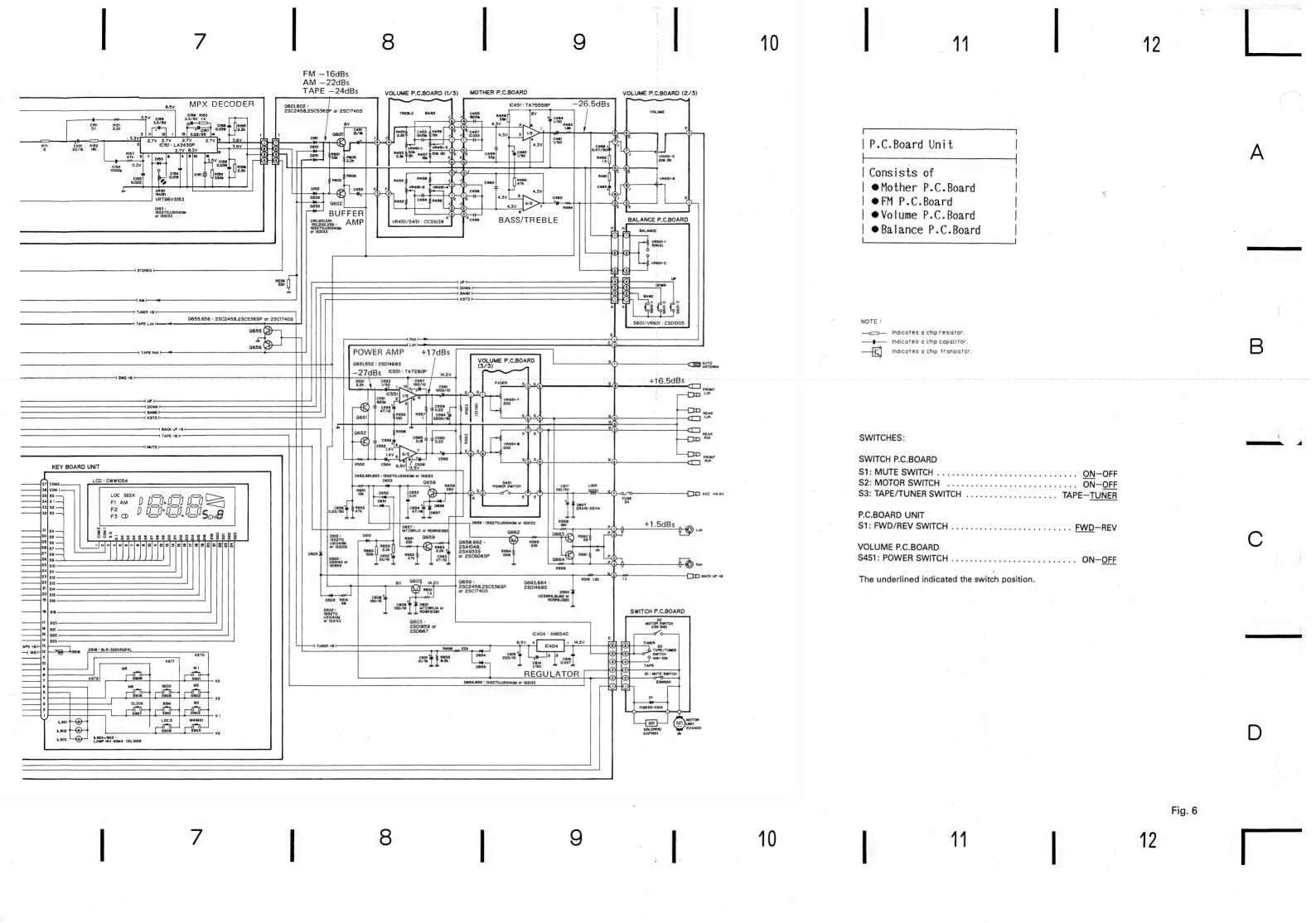
SEGMENT

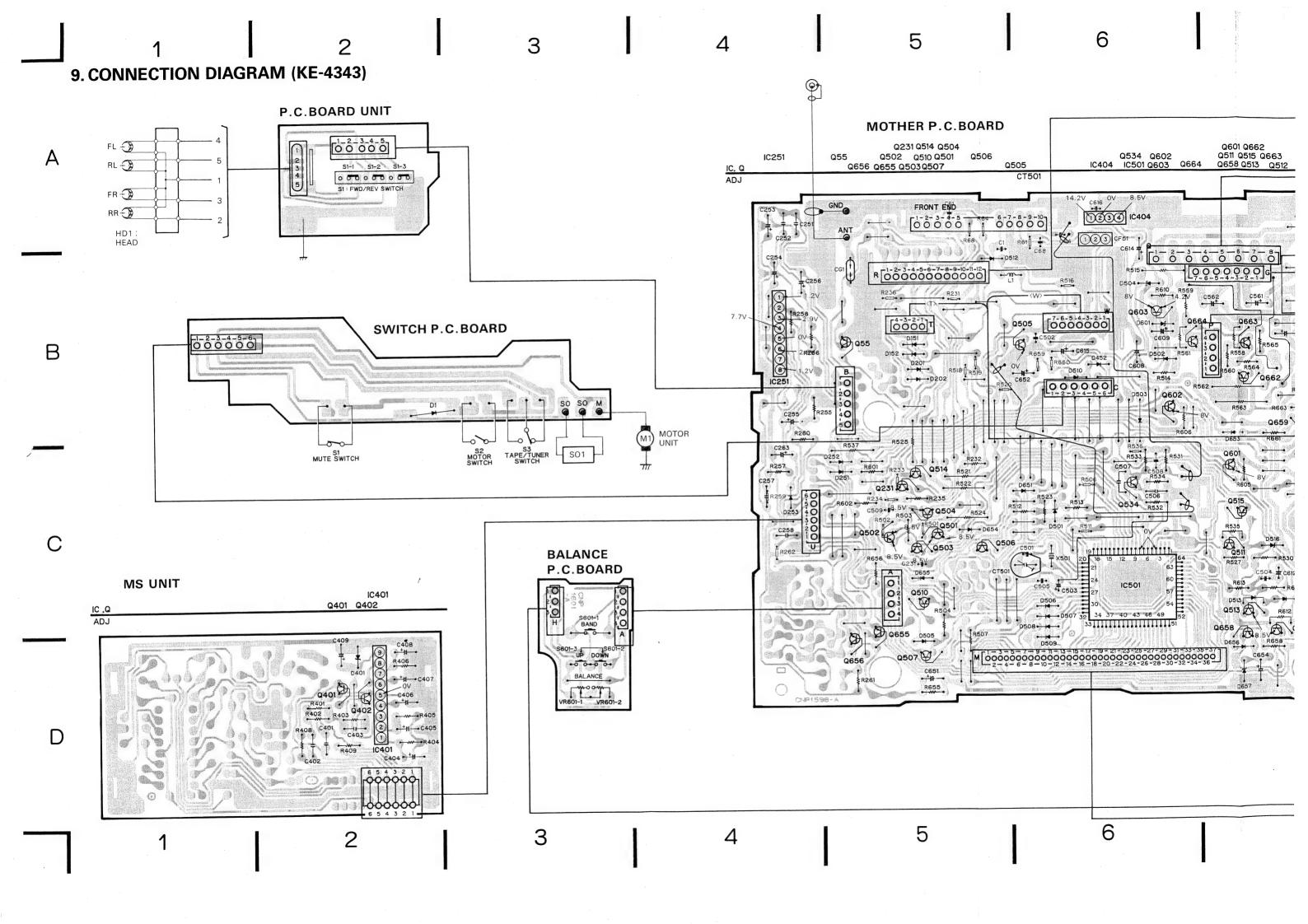


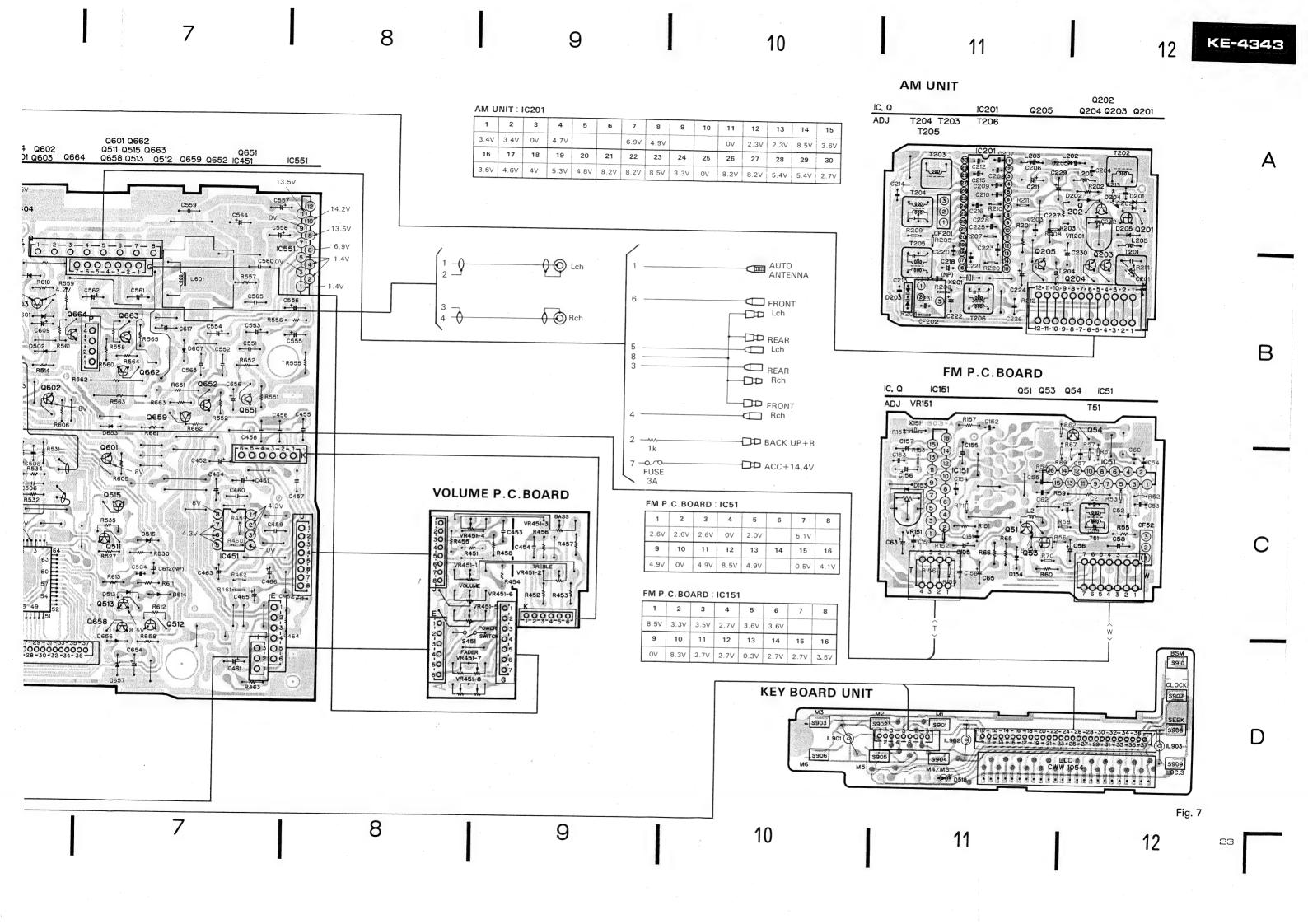
COMMON

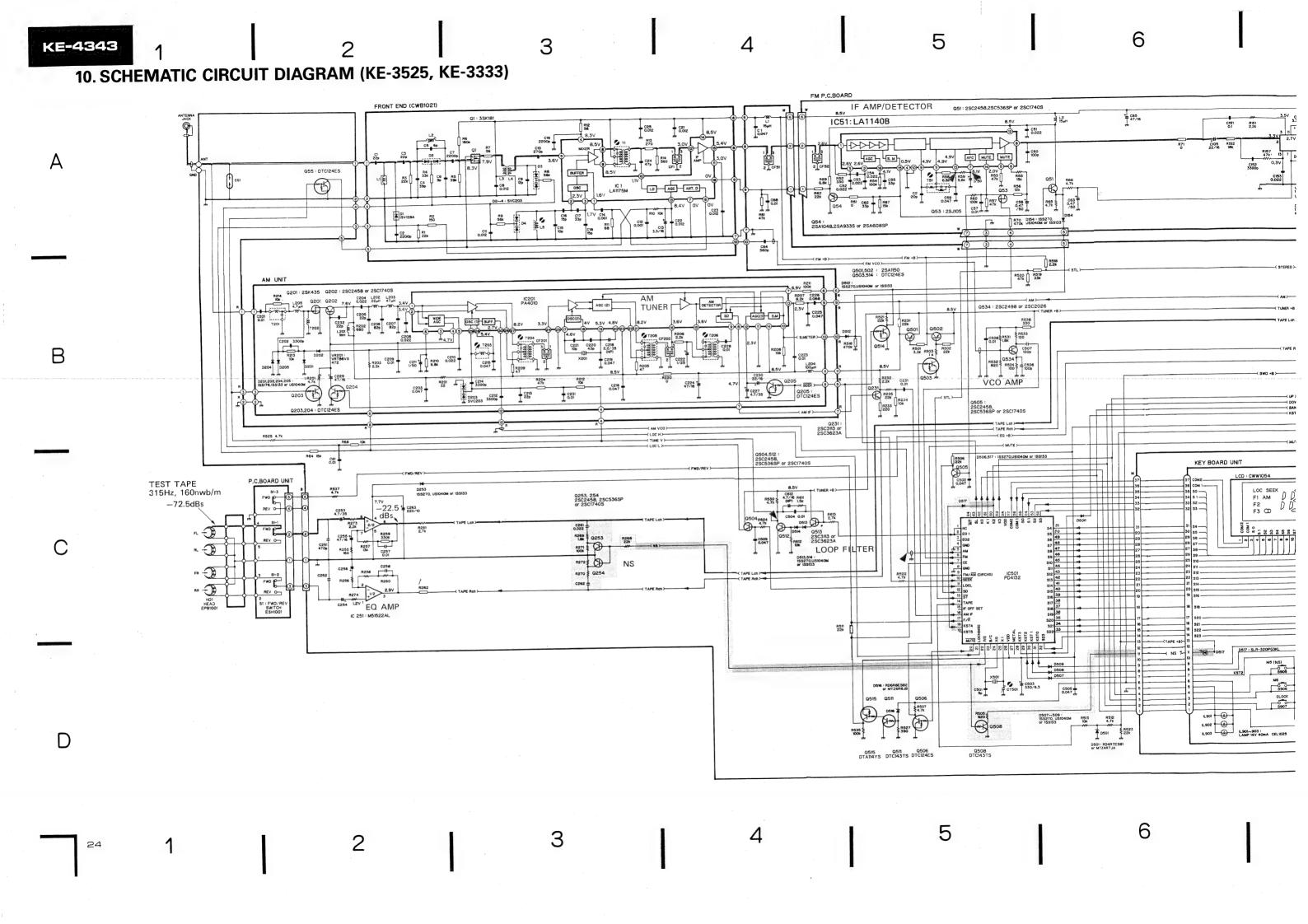


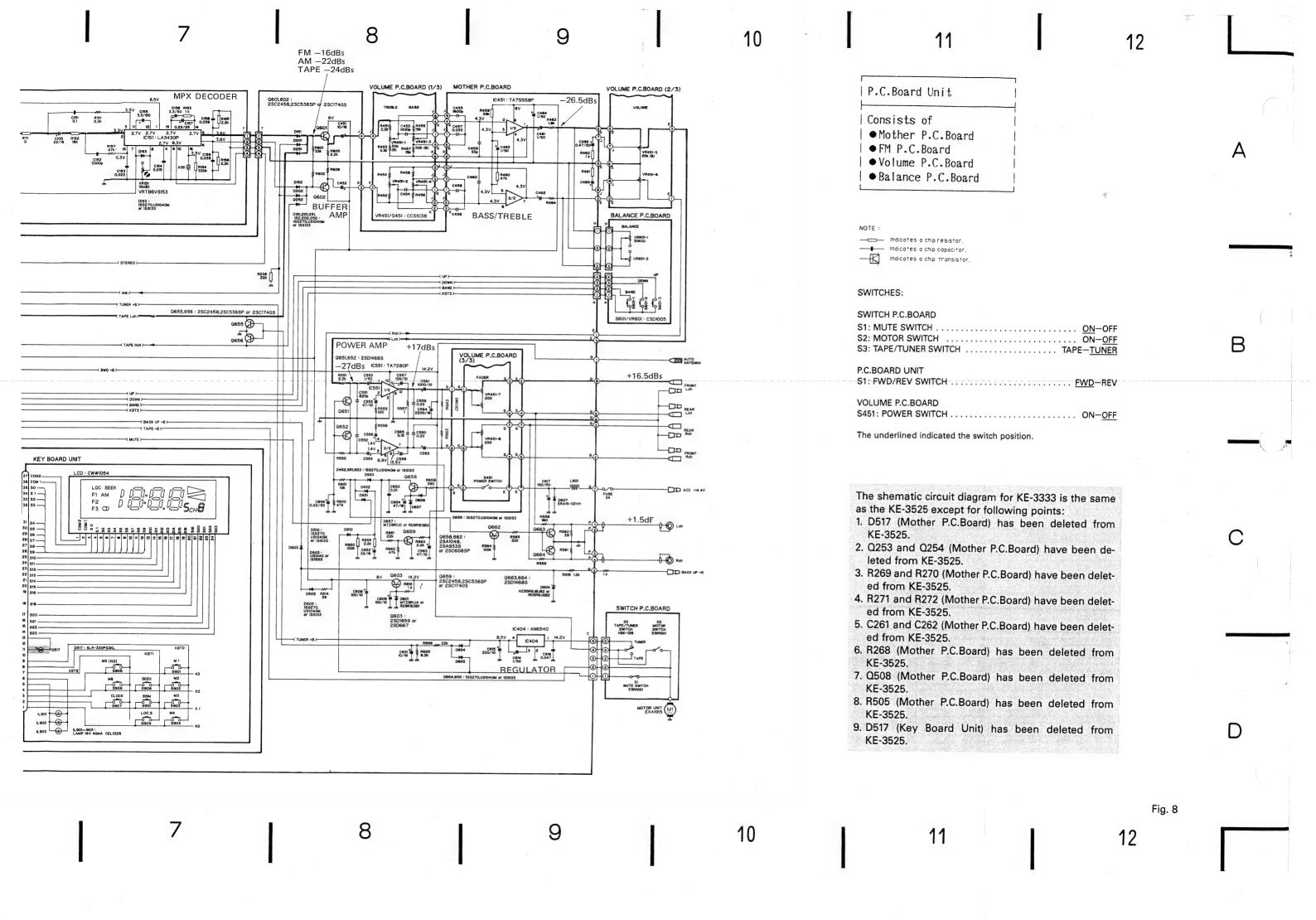


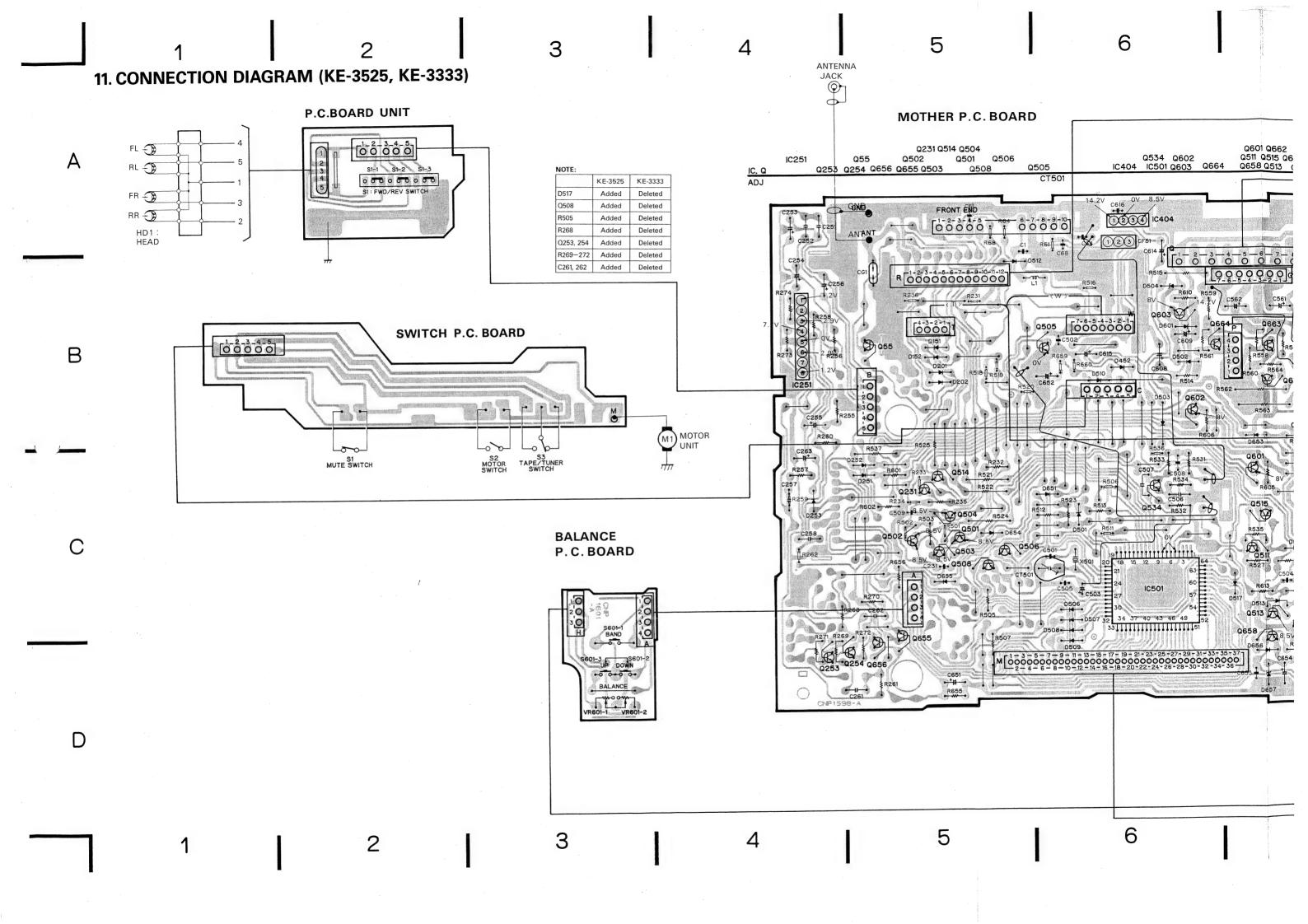


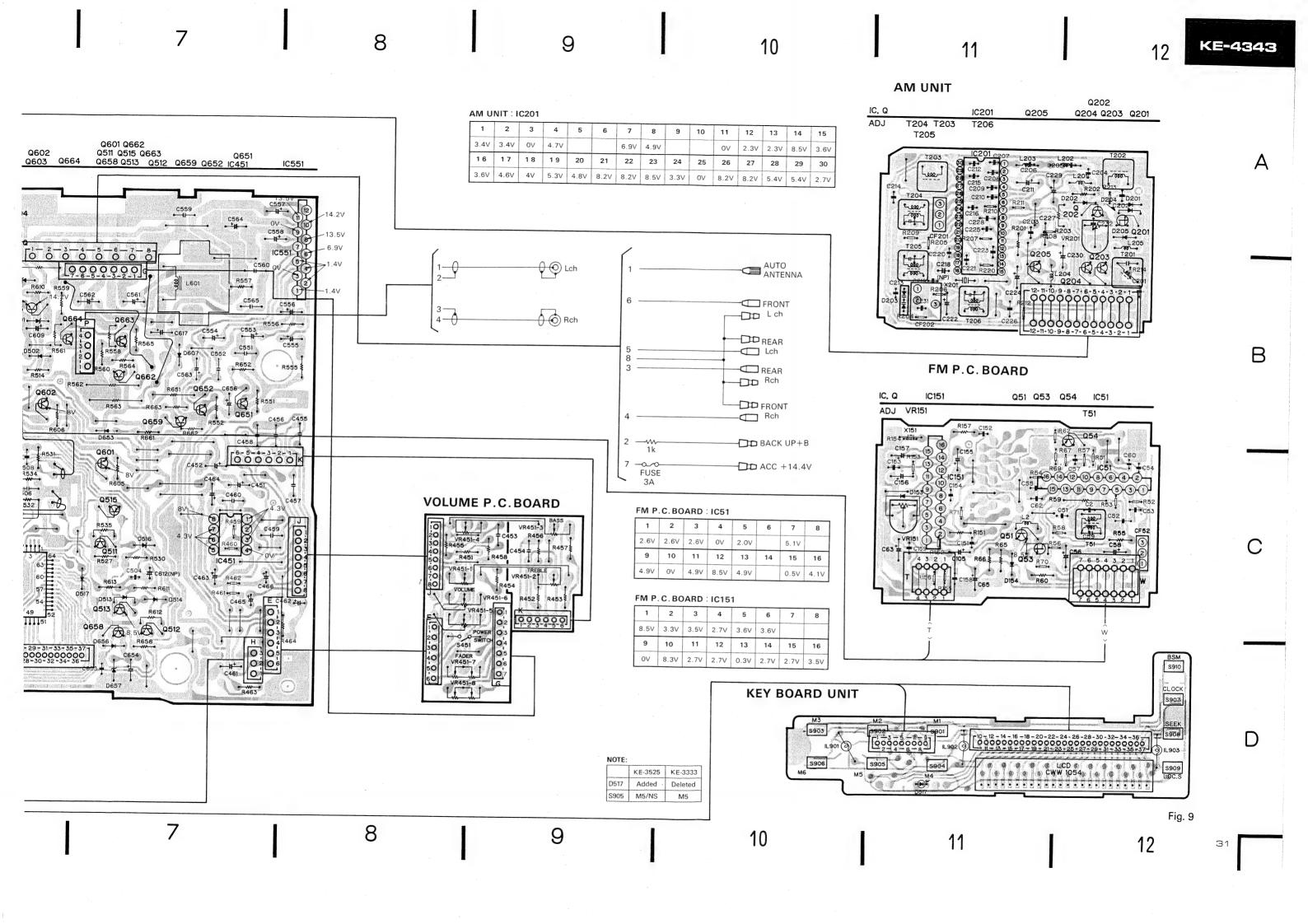


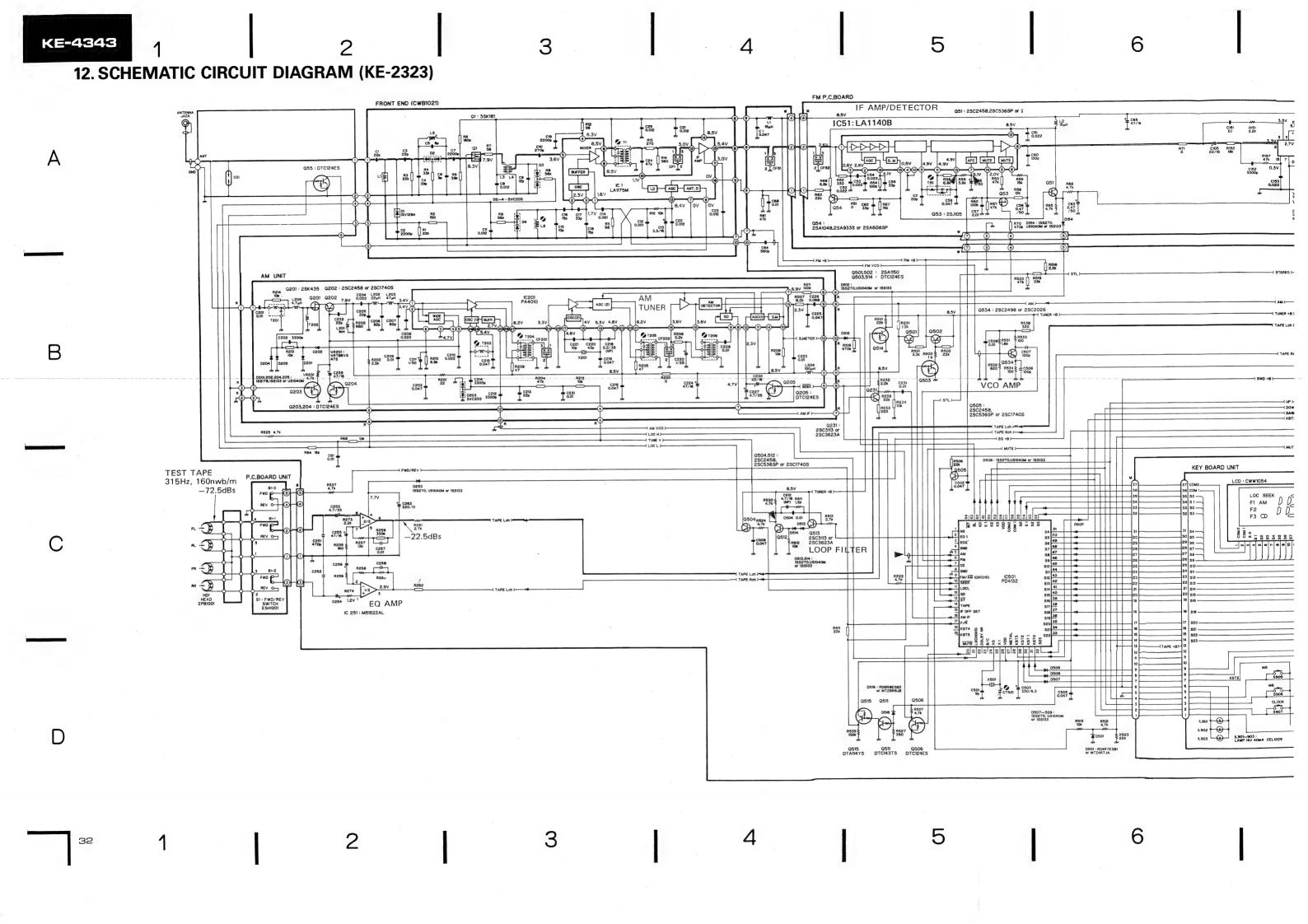


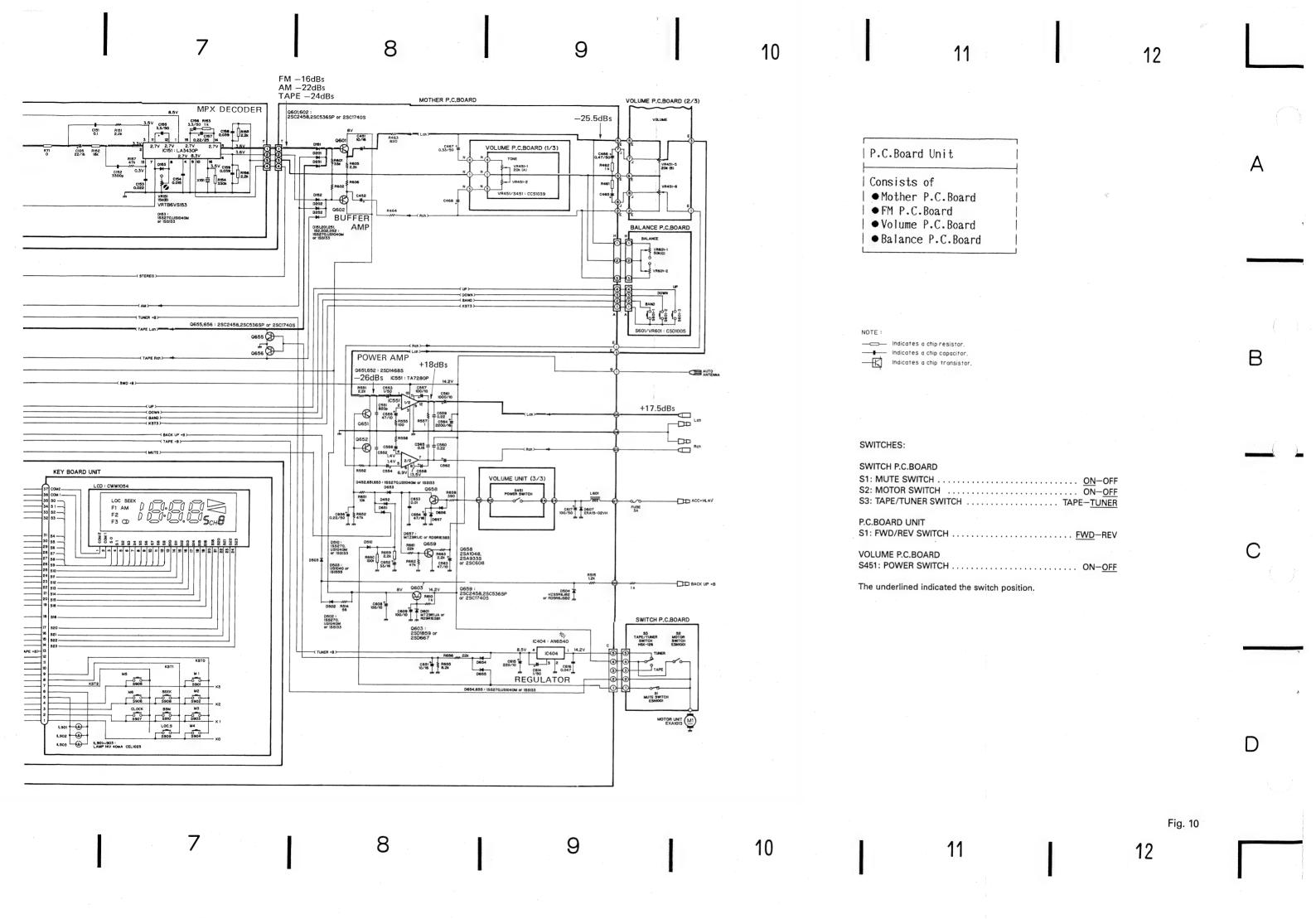


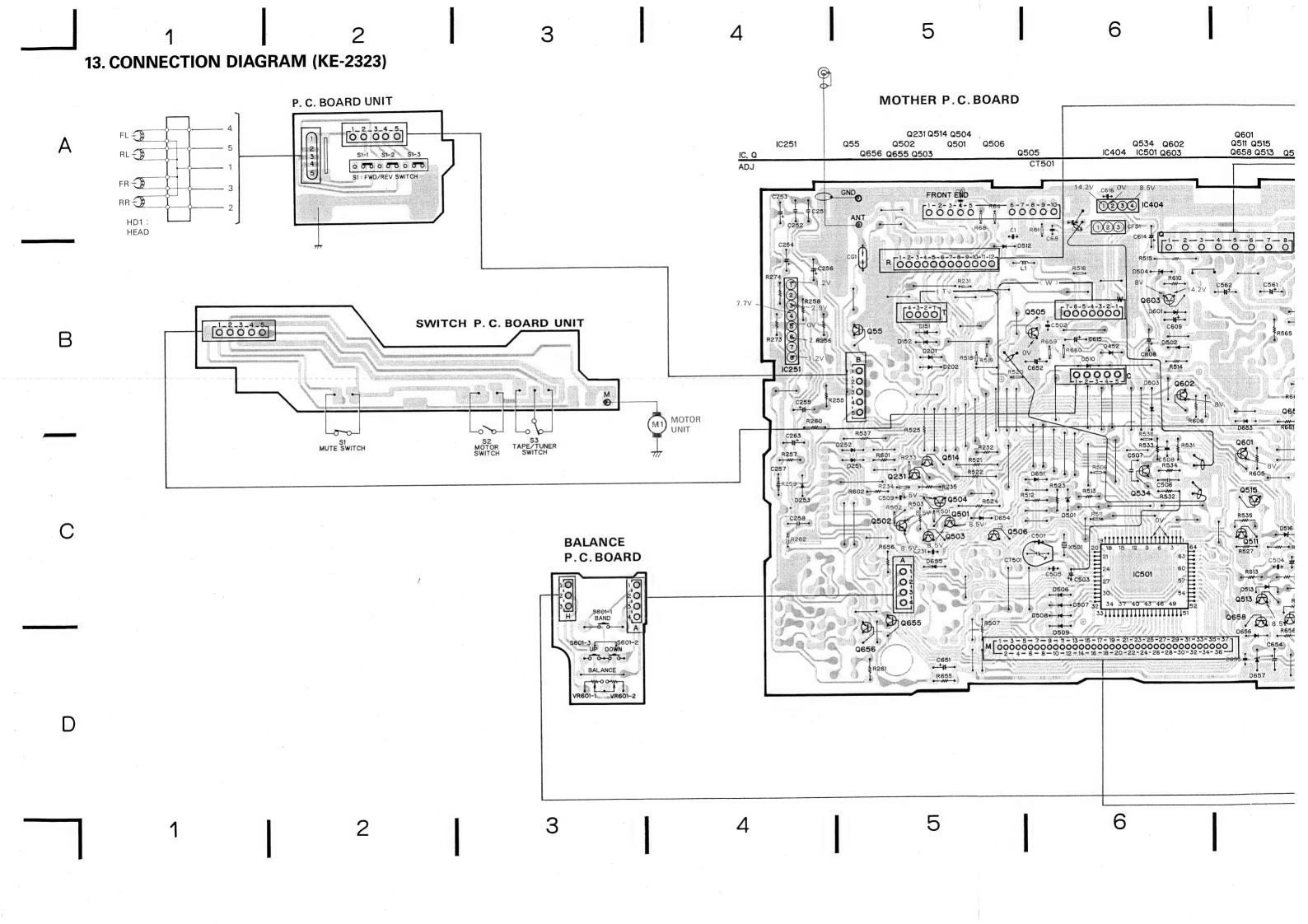


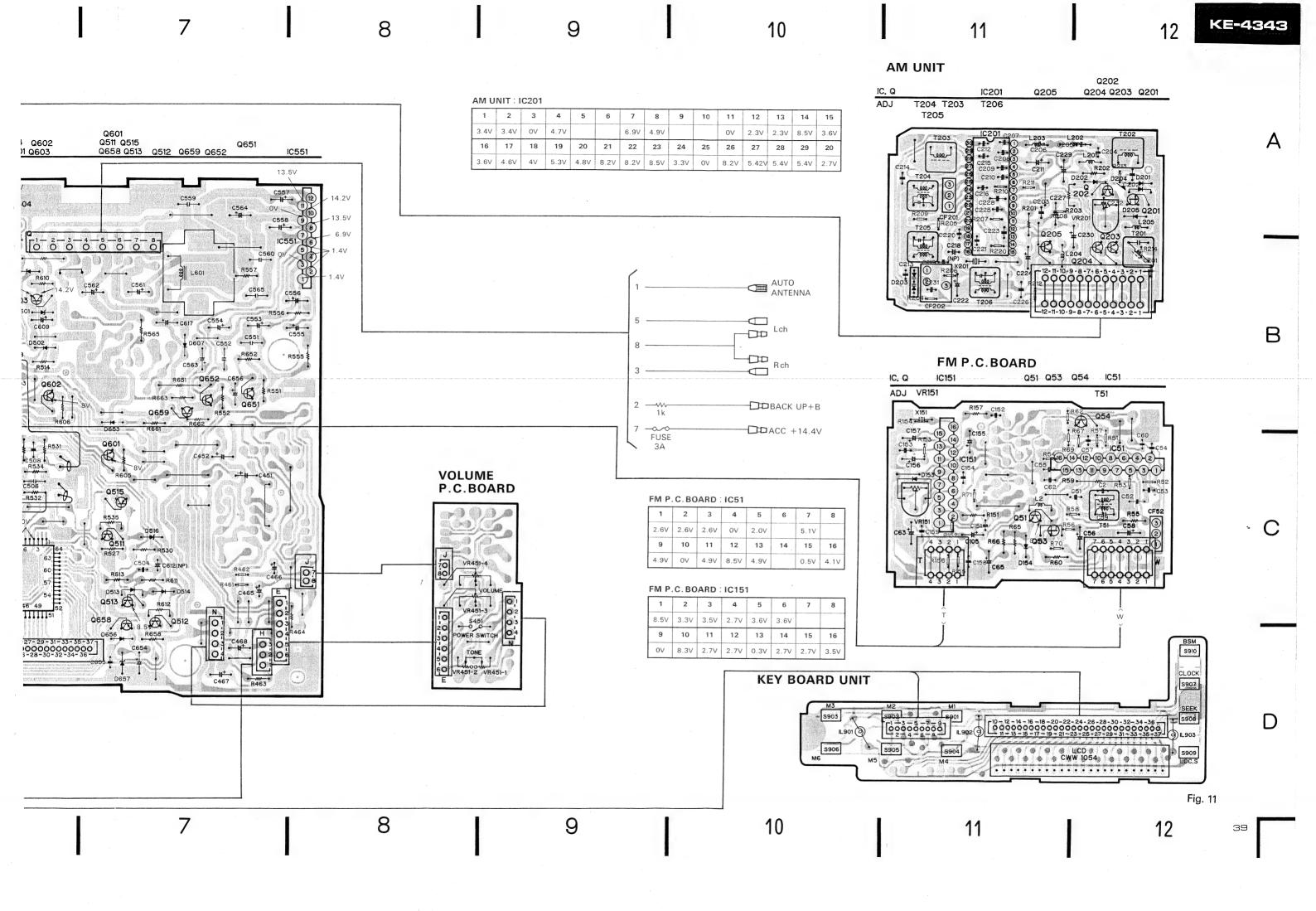


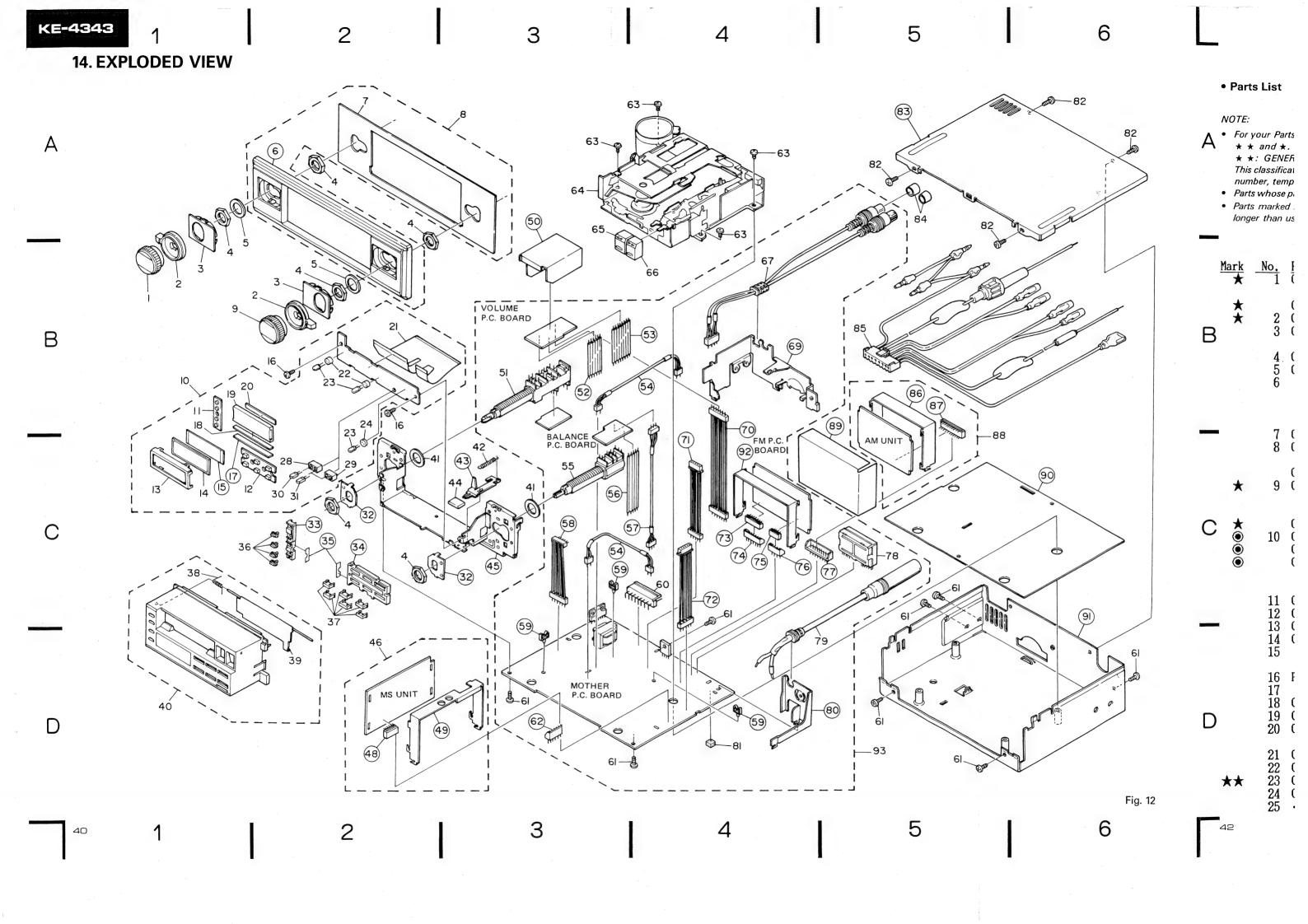












Parts List

NOTE:

- For your Parts Stock Control, the fast moving items are indicated with the marks
 ★ ★ and ★.
 - ★ ★: GENERALLY MOVES FASTER THAN ★.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "

 " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

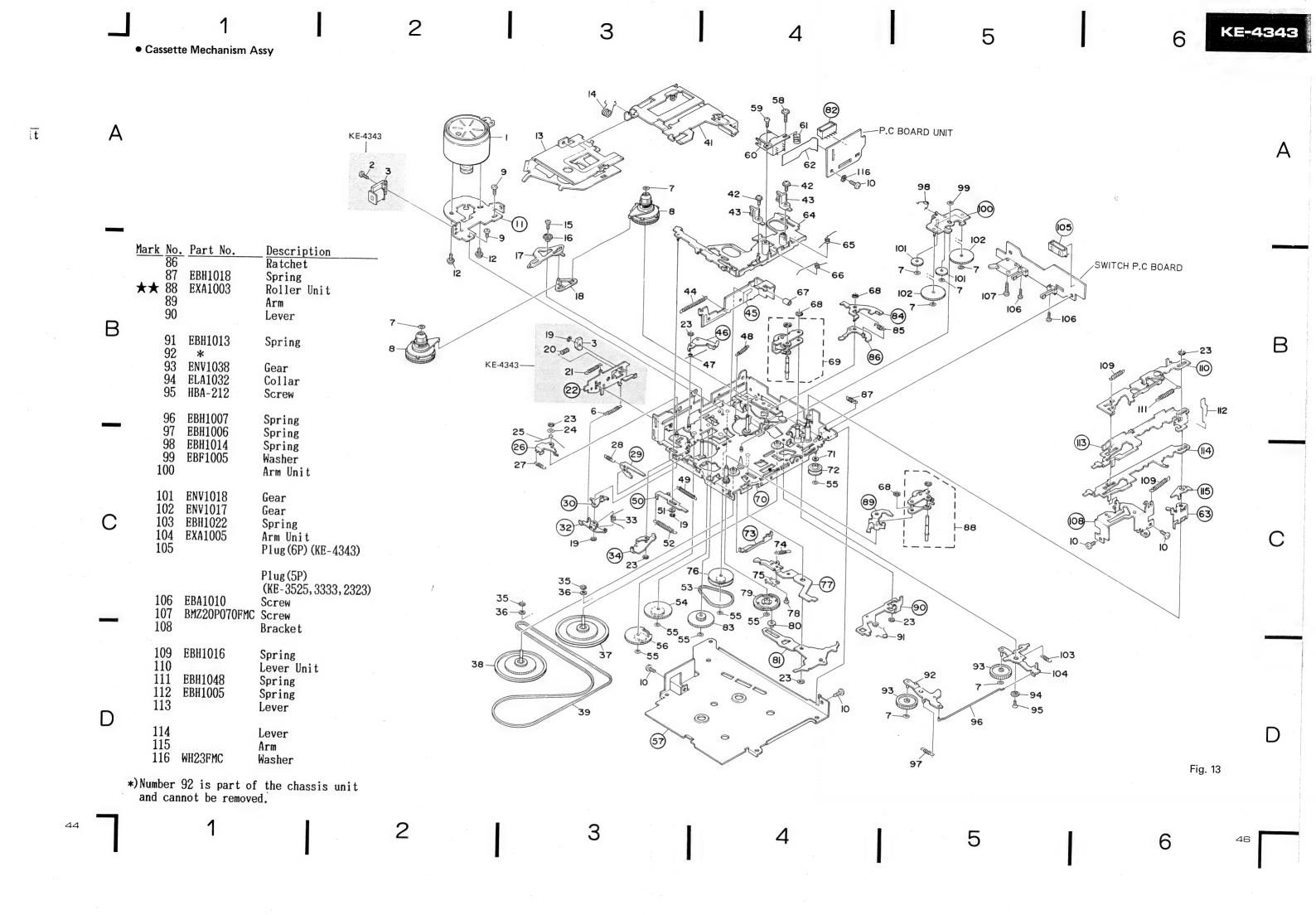
<u> </u>	1ark ★	No. 1	Part No. CAA1011	Description Knob(KE-4343, KE-3525,	Mark	No. 26	Part No.	Description
В	*	2 3	CAA1109 CAA1054 CNK-292	KE-3333) Knob (KE-2323) Knob Cap	*	27 28 29 30	CNV1302 CNV1302 SLR-320VR3FKL	Bush (KE-4343) Bush (KE-3525) LED (KE-4343)
		4 5 6	CBN-028 CND-646	Nut Spacer Panel (KE-4343, KE-3525	*	31 32 33	SLR-320PG3KL	LED(KE-3525) Holder Lens
				KE-3333) Panel (KE-2323)		34 35		Lens Plate
		7 8	CNG-633 CXA1968	Plate Panel Assy(KE-4343, KE-3525,KE-3333)	*	36 37 38	CAC1712 CAC1540 CBH1033	Button Button Spring
	*	9	CXA1975 CAA1113	Panel Assy (KE-2323) Knob (KE-4343, KE-3333, KE-2323)		39	CAT1117 CAT1110	Door (KE-4343) Door (KE-3525)
С	**	10	CAA1122 CWS1090 CWS1092 CWS1093	Knob(KE-3525) Key Board Unit(KE-434 Key Board Unit(KE-352 Key Board Unit (KE-3333, KE-2323)		40	CAT1119 CXA2003 CXA2006 CXA2005 CXA2007	Door(KE-3333,2323) Grille Unit(KE-4343) Grille Unit(KE-3525) Grille Unit(KE-3333) Grille Unit(KE-2323)
		11	CNV1375	Rubber		41 42	CBE-084 CBH1084	Spacer Spring
		12 13 14 15	CNV1760 CNH-136 CWW1054	Rubber Holder LCD Plate	*	43 44 45	CAC1550	Lever Button Frame Unit
		16	PMZ20P050FMC	Screw	•	46 47	CWM1455	MS Unit(KE-4343)
D		17 18 19 20	CNY-214 CNY-215 CNN-137	Insulator Connector Lens Spacer		48 49 50		Connector (KE-4343) Holder (KE-4343) Insulator
		21	CNP1670	P.C.Board	**	51	CCS1038	Volume(KE-4343, KE-3525, KE-3333)
7	**	22 23 24 25	CNV1088 CEL1025 CNV1102	Bush Lamp Bush	**	52	CCS1039	Volume (KE-2323) Connector

Mark	No. 53	Part No.	Connector (8P) (KE-4343,	1ark	No. 73	Part No.	Description Connector
**	54 55	CSD1005	KE-3525, KE-3333) Connector (2P) (KE-2323) Connector Switch		74 75 76 77		Plug Connector Plug Plug
	56 57 58 59		Connector Connector Connector (KE-4343, KE-3525, KE-3333) Clamper		78 79 80 81 82	CWB1021 CDH1069 CNN-412 BMZ30P040FMC	Front End Antenna Cable Holder Cushion Screw
•	60 61 62 63 64	CKS-465 BMZ30P060FMC BMZ26P050FMC EXK1010	Plug Screw Plug(KE-4343) Screw Cassette Mechanism Assy (KE-4343)		83 84 85	CNW-829 CDE1769 CDE1770	Case Cap (KE-4343, KE-3525, KE-3333) Cord Assy (KE-4343, KE-3525, KE-3333) Cord Assy (KE-2323)
****	65 66	EXK1130 CAC1358 CAC1357	Cassette Mechanism Assy (KE-3525, KE-3333, KE-232 Button(<<) Button(▷▷)		86 87 88 89	CWA1009	Holder Plug AM Unit Insulator
	67 68 69 70	CDE1674	Connector (KE-4343, KE-3525, KE-3333) Heat Sink Connector (7P) (KE-4343, KE-3525, KE-3333)		90 91 92		Insulator Chassis Unit(KE-4343, KE-3525,KE-3333) Chassis Unit(KE-2323) Holder
	71 72		Connector (4P) (KE-2323) Connector (6P) (KE-4343) Connector (5P) (KE-3525, KE-3333, KE-2323) Connector	••••	93	CWM1439 CWM1447 CWM1445	P.C.Board Unit (KE-4343) P.C.Board Unit (KE-3525) P.C.Board Unit (KE-3333)
						CWM1451	P.C.Board Unit (KE-2323)

15. CASSETTE MECHANISM ASSY EXPLODED VIEW

• Pai	Parts List								
	No.	Part No.	Description	Mark		Part No.	Description		
**	1	EXA1013 EBA1008	Motor Unit Screw(KE-4343)		41 42	EXA1014 PMS20P040FMC	Cassette Frame I	Jni t	
*	2 3	EXP1001	Solenoid (KE-4343)		42	ENV1016	Tape Guide		
	4,5	• • • •			44	EBH1047	Spring		
	6	EBH1056	Spring(KE-4343)		45		Lever		
		EBH1011	Spring(KE-3525,3333,		46		Arm		
	7	CDE 1CC	2323)		47	EBH1040	Spring		
**	7 8	CBF-166 EXA1012	Washer Reel Unit		48 49	EBH1041 EBH1021	Spring Spring		
~~~	9	BMZ23P030FMC			50	5511021	Lever		
	10	BSZ23P040FMC	Screw		51	EBE1001	Washer		
	11		Bracket		52	EBH1009	Spring		
	12	PMS26P025FUC		**		ENT1004	Belt		
	13 14	ENC1013 EBH1019	Cassette Holder Spring		54 55	ENV1034 CBF-135	Gear Washer		
	15 16	EBA1009 ELA1042	Screw Collar		56 57	ENV1014	Gear Cover		
	17	ENV1032	Arm		58	EBA1011	Screw		
	18	ENV1031	Arm		59	BMZ20P050FMC			
	19	YE12FUC	Washer	**	60	EPB1001	Head		
	20	ЕВН1038	Spring(KE-4343)		61	CBH-198	Spring	٠.	
	21	EBH1012	Spring (KE-4343)		62	ENP1003	P.C.Board		
	22 23	YE15FUC	Lever Unit(KE-4343) Washer		63 64	EXA1004	Arm Head Base Unit		
	24	CBF-165	Washer		65	EBH1004	Spring		
	25	ЕВН1049	Spring		66	EBH1003	Spring		
	26	CDIIIV43	Arm		67	CNY-265	Cushion		
	27	ЕВН1037	Spring		68	YE20FUC	Washer		
	28	ЕВН1039	Spring	**		EXA1002	Roller Unit		
	29		Arm		70	/	Chassis Unit		
	30		Arm		71	EBF1004	Washer		
	31 32	• • • • •	Arm(KE-4343)		72	ENV1009	Pulley		
	32		Arm (KE-3525, 3333,		73 74	EBH1025	Lever Spring		
			2323)		75	EBL1001	Spring		
	33	ЕВН1008	Spring(KE-4343)		76	ENV1010	Pulley		
	UU	EBH1050	Spring (KE-3525, 3333,		77	PHATOTO	Arm		
	0.4		2323)		78	HBA-147	Screw		
	34 35	CBG1001	Arm Unit Washer		79 80		Gear Collar		
,			naolici		OV	CPWIA10	Ollar		
	36	HBF-179	Washer		81		Arm		
	37 38	ENV1029 ENV1030	Flywheel (N) Flywheel (R)		82 83		Plug Gear		
**		ENT1003	Belt		ია 84		Arm		
	40	••••			85		Spring		

 Cassette Mechanism Assy KE-4343 Mark No. Part No. Description Ratchet EBH1018 Spring ** 88 EXA1003 Roller Unit Arm Lever В 91 EBH1013 Spring 92 *
93 ENV1038
94 ELA1032
95 HBA-212 KE-4343-Gear Collar Screw Spring Spring EBH1007 97 EBH1006 98 EBH1014 99 EBF1005 100 Spring Washer Arm Unit 101 ENV1018 102 ENV1017 103 EBH1022 Gear Gear Spring 104 EXA1005 Arm Unit Plug (6P) (KE-4343) 105 Plug (5P) (KE-3525, 3333, 2323) 106 EBA1010 Screw 107 BMZ20P070FMC Screw 108 Bracke Bracket 109 EBH1016 110 111 EBH1048 112 EBH1005 Spring Lever Unit Spring Spring 113 Lever D 114 Lever 115 Arm 116 WH23FMC Washer *) Number 92 is part of the chassis unit and cannot be removed.



# **16. ELECTRICAL PARTS LIST**

# NOTE:

- For your parts Stock Control, the fast moving items are indicated with the marks ‡‡ and ‡.
  - ** : GENERALLY MOVES FASTER THAN *.
- This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.'
- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components. Chip Resistor

RS1/8S \( \sigma \sup J, \text{ RS1/10S } \sup \sup J \)
Chip Capacitor (except for CQS.....)
CKS....., CCS....., CSZS.....

Unit Number: Unit Name : AM Unit

Unii	, Na	ame .	AM Unit			
MISC	MISCELLANEOUS					CAPACITORS
Mark	===		Circuit	Symbol & No. ==== Part Name	Part No.	Mark ====== Circuit Symbol & No. ==== Part Name Part No.
	IC Q Q	201 201 202			PA4010 2SK435 2SC2458 (2SC1740S)	C 201 209 223 231 CKSQYB103K50 C 202 212 214 CKSQYB332K50 C 203 215 216 219 CKSQYF473Z50 C 204 208 210 CKSQYB223K50
**	Q	203 204	205		DTC124ES	C 205 213 CCSQCH220J50
*	D D L	201 202 203 201	2 204 205	Variable Capacitance Diode Ferri-Inductor	1SS176 (1SS133) (US1040M) SVC203-AB CTF1026	C 206 207 CCSQCH820J50 C 211 CEA010M50LS2 C 218 CEA2R2M35NPLL C 220 CCSQCH430J50 C 221 CCSQCH100D50
	L L L T	202 203 204 205 201		Ferri-Inductor Ferri-Inductor Ferri-Inductor Ferri-Inductor Coil	LAU220K LAU470K CTF-157 LAU4R7K CTB1020	C 222 CSZA010K25 C 224 229 CEA470M16LS C 225 CKSQYF333Z50 C 226 CKSYF683Z50 C 227 CEA4R7M35LS
	T T T T	202 203 204 205 206		Coil Coil Coil Coil	CTB1004 CTB1017 CTE1013 CTE1014 CTE1015	C 228 CKSYB103K50 C 230 CEA220M16LS C 232 CCSQCH220J50
**	CF X	201 202 201 201		Filter Filter Xtal Resonator Semi-fixed 4.7kΩ(B)	CTF1027 CTF-100 CSS1014 VRTB6VS472	P.C.Board Unit
RES!				Symbol & No. ==== Part Name	Part No.	Consists of
	R R R R	201 202			RD1/4PS220JL RD1/4PS681JL RD1/4PS222JL RS1/10S473J RS1/10S470J	Unit Number: Unit Name: P.C.Board Unit
	R R R	209	2 213 214		RS1/10S222J RS1/10S822J RS1/10S103J RS1/8S470J	MISCELLANEOUS  Mark ====== Circuit Symbol & No. ==== Part Name Part No.
	R	210			RS1/10S682J	** IC 51 LA1140B ** IC 151 LA3430P

RS1/10S104J

RS1/8S0R0J

** IC 251

** IC 404

** IC 451(KE-4343, KE-3525, KE-3333)

M51522AL

TA75558P

48

AN6540

		···· ··· ··· ··· ··· ··· ··· ··· ··· ·			
		501	PD4132	* D 657	MTZ9R1JC (RD9R1ESB3
		551	TA7280P 2SC2458	L 1 2 Inductor	LAU150K
ŕ	Ų	51 504 505 512 601 602 655 656 659	(2SC536SP)	L 601 Choke Coil	CTF-002
			(2SC1740S)	T 51 Coil	CTC1029
			200111007		3,01020
ķ	Q	53	2SJ105	CT 501 Trimmer	CCG-070
ŧ	Q	54 658	2SA1048	CG 1 Capacitor with Discharge Gap	CCX-006
			(2SA933S)	CF 51 52 Ceramic Filter	CTF-182
	_		(2SA608SP)	X 151 Ceramic Resonator	CSS1028
ķ	Q	55 503 506 514	DTC124ES		(CSS1022)
ł	Λ	231 513	2SC3113	X 501 Xtal Resonator	CSS1011
	-		(2SC3623A)	X 501 Xtal Resonator ** S 601/VR 601 Switch/Volume 50kΩ(G)	CSD1005
k	Q	253(KE-3525) 254(KE-3525)	2SC2458	** VR 151 Semi-fixed 15kΩ(B)	VRTB6VS153
			(2SC536SP)	** VR 451/S 451(KE-4343, KE-3525, KE-3333)	CCS1038
			(2SC1740S)	Volume/Switch $200\Omega$ , $20k\Omega(B)$ , $50k\Omega(B)\times 2$	200,000
k	0	501 502	2SA1150	44 VP /51/C /51/VE-2222)	CCC1020
		507 (KE-4343)	DTC143TS	** VR 451/S 451(KE-2323) Volume/Switch 20kΩ(A), 20kΩ(B)	CCS1039
		508(KE-3525)	DTC143TS	Front End	CWB1021
		510(KE-4343)	DTA114YS		J
	Q	511	DTC143TS	RESISTORS	
	n	515	DTA114YS	Mark ===== Circuit Symbol & No. ==== Part Name	Part No.
		534	2SC2498		
•	u	0.04	(2SC2026)	R 51	RS1/8S0R0J
	Q	603	2SD1859	R 52	RS1/10S331
			(2SD667)	R 53 57	RS1/10S473
				R 54	RS1/10S104
		651 652	2SD1468S	R 55	RD1/4PS153
ķ	Q	662(KE-4343, KE-3525, KE-3333)	2SA1048	R 56	RS1/10S123
			(2SA933S)	R 58	RS1/10S682
		COD/NE 4040 NE OFOE NE OOOS	(2SA608SP)	R 59	RD1/4PM562
ķ	Q	663(KE-4343, KE-3525, KE-3333)	2SD1468S	R 60	RD1/4PS104
ŧ	n	664(KE-4343, KE-3525, KE-3333)	2SD1468S	R 61	RS1/10S473
		151 152 153 154 201 202 251 252 253 452	1SS270	D 00	DC1 (100000
•		101 102 100 101 201 202 201 202 200 102	(US1040M)	R 62	RS1/10S223 RS1/10S153
			(1SS133)	R 64 67 R 65 66	RD1/4PS472
k	D	501	RD4R7ESB1	R 68	RS1/10S103,
			(MTZ4R7JA)	R 69	RS1/8S682J
ķ	D	502 506 507 508 509 510 512 513 514	1SS270	D 70	DC1 /100/17/
			(US1040M)	R 70 R 71	RS1/10S474 RS1/8S0R0.J
			(1SS133)	R 151 232 551 552 663	RD1/4PS222
*	D	503	US1040	R 152	RS1/10S183
			(1S1555)	R 153	RS1/10S102
k	D	504	HZS5R6,JB2	R 154	RS1/10S334
			(RD5R6JSB2)	R 155 156	RS1/10S334
*	D	505(KE-4343)	1SS270	R 157	RD1/4PS473
			(US1040M)	R 231(KE-4343, KE-3525, KE-3333)	RS1/10S223
			(1SS133)	R 231(KE-2323)	RS1/10S103
ķ	D	516	RD6R8ESB2	p 999	RS1/10S221
			(MTZ6R8JB)	R 233 R 234	RS1/10S221
k	D	517(KE-3525)	1SS270	R 235 523 656	RD1/4PS223
			(US1040M)	R 236(KE-4343, KE-3525, KE-3333)	RS1/10S223
			(1SS133)	R 255 256	RD1/4PS161
	D	601	MTZ9R1,JA	R 257 258	DD1 //IDC199
			(RD9R1ESB1)	R 259	RD1/4PS133 RS1/10S334
	D	607	ERA15-02VH	R 260	RD1/4PS334
			1SS270		
:	D	651 653 654 655 656	(US1040M)	R 261	RD1/4PS272

Mark ======

R 268(KE R 269(KE R 271(KE

R 273(KE R 274(KE

R 451(KE R 452(KE

R 453(KE

R 454(KE

R 455(KE

R 456(KE R 457(KE R 458(KE

R 459(KE R 460(KE

R 461 46:

R 463(KE-R 463(KE-R 501

R 502 51: R 503 610 R 504(KE-R 505(KE-R 506 R 507 512 R 513 612

R 514 R 515 R 516 R 518 655 R 519 R 520 R 521 R 522 524

R 527 658 R 531 R 532 R 533 534 R 535

R 536 R 537 R 557 R 558(KE-R 559(KE-

R 560(KE-R 561(KE-R 562(KE-R 563(KE-R 564(KE-

R 565(KE-R 601 602 R 605 606 R 611 R 613 R 651 R 652 662

R 655 R 660 R 661

49

R 211

R 259

R 260

R 261

R 262

ERA15-02VH

(US1040M)

(1SS133)

1SS270

Mark ====== Circuit Symbol & No. ==== Part Name Part No. ---- ------ Mark ===== Circuit Symbol & No. ==== Part Name Part No.

	====== Circuit Symbol & No. ==== Part Name		CAPACITORS	
 R	268(KE-3525)	RD1/4PS223,IL	Mark ====== Circuit Symbol & No. ==== Part Name Part	No.
R	,,	RD1/4PS182,JL		
R	271(KE-3525) 272(KE-3525)	RD1/4PS104,IL	Child	YF473Z50
R	273(KE-3525, KE-3333, KE-2323)	RD1/4PS222,JL	CON	CH200J50
R	274(KE-3525, KE-3333, KE-2323)	RD1/4PS222JL	yen)	YB223K50
D	#E1/VE #2#2 2525 2222)	DD1 /4DC000 II		B223K50
R	451(KE-4343, 3525, 3333) 452(KE-4343, 3525, 3333)	RD1/4PS222,JL	0 00 02	SL330J50
R	453(KE-4343, 3525, 3333)	RD1/4PS222,IL RD1/4PS332,IL		
R	454(KE-4343, 3525, 3333)	RD1/4PS332.IL	C 50 05	47M50LS2
R	455(KE-4343, 3525, 3333)	RD1/4PS153,IL	CKSQ	YB103K50 10M50LS2
			OB/NO.	YF473Z50
R	456(KE-4343, 3525, 3333)	RD1/4PS153,JL		SL101J50
R	457(KE-4343, 3525, 3333)	RD1/4PS153.JL		
R R	458(KE-4343, 3525, 3333) 459(KE-4343, 3525, 3333)	RD1/4PS153JL	C 01 00 CASA	YB103K50
R	460(KE-4343, 3525, 3333)	RS1/10S393,J RS1/10S473,J		YB561K50
ı	100\nL 4040, 3323, 3333/	K317103413.)		70M16LS 20M16LS
R	461 462	RS1/8S102,J		YF104Z25
R	463(KE-4343, 3525, 3333)	RD1/4PS182,IL		11 104220
R	464(KE-4343, 3525, 3333)	RD1/4PS182,IL		YB332K50
R	463(KE-2323) 464(KE-2323)	RD1/4PS821JL	. C 154 CKSQ	YB153K50
R	501	RS1/10S332J		R3M50LS
R	502 511	DC1 /10C0001		R22M35
R	503 610	RS1/10S223,J RD1/4PS102,JL		B393K25
R	504(KE-4343)	RD1/4PS821,JL		YB103K50
R	505(KE-3525)	RD1/4PS821.IL		B471K50
R	506	RS1/8S223,J	0.000	L4R7M35LL
				70M16LS
R	507 512 530	RD1/4PS472JL	C 201 200 C.UTA	103K50
	513 612 514	RD1/4PS103JL		
R	515	RD1/4PS560,IL RD1/4PM122,J	C 201(NE-3323) 202(NE-3323) (GC1)	X223K25
R	516	RS1/10S474J		21M10L2
		NS17 105414.j		00M16LS X182K25
R	518 659	RS1/10S222J		X182K25
	519	RS1/10S333J	V IOI(III IOIO) III OOOO) Cuoi,	TOLINEO
R	520	RS1/10S473J	C 455(KE-4343, KE-3525, KE-3333) CGCY	X182K25
R R	521 522 524 525	RD1/4PM223J		X182K25
I,	322 324 323	RD1/4PM472J		X333M25
R	527 658	RD1/4PS391,JL		X333M25
R	531	RD1/4PS182,IL	( 100 NL 1010 NL 0020 NL 0000)	L330J50L
R	532	RD1/4PS821JL		L330J50L
R	533 534 555 556	RD1/4PS101JL	C 461(KE-4343, KE-3525, KE-3333) CEAO	10M50L2
R	535	RD1/4PS104JL		10M50L2
R	536	PC1 /10C991 I	C 463(KE-4343, KE-3525, KE-3333) CEAO	10M50L2
	537	RS1/10S331J RD1/4PM472J	C 464(KE-4343, KE-3525, KE-3333) CEAO	10M50LS2
R	557	RD1/4PS010JL	C ACE ACC	AZMENTO
R	558(KE-4343, KE-3525, KE-3333)	RD1/4PS181,IL	C 403 400 CEAK	47M50L2 33M50LS2
R	559(KE-4343, KE-3525, KE-3333)	RD1/4PS181JL	o lor(ne zobo) log(ne zobo)	CH090D50
			000	YF473Z50
R	560(KE-4343, KE-3525, KE-3333)	RD1/4PS390,JL	C 503 CEA33	31M6R3L2
R	561(KE-4343, KE-3525, KE-3333)	RD1/4PS390JL		
R	562(KE-4343, KE-3525, KE-3333)	RS1P220,JL		B101K50L
R R	563(KE-4343, KE-3525, KE-3333) 564(KE-4343, KE-3525, KE-3333)	RS1P220JL		B103K50
	201(no 1010) NE 0020, NE 0000/	RD1/4PS104JL		B821K50 10M50L2
R	565(KE-4343, KE-3525, KE-3333)	RD1/4PS223JL		70M10L2
	601 602	RD1/4PS333,JL	CDAY.	VIII VUA
	605 606	RD1/4PS222JL	C 557 558 608 609 CEA10	01M10L2
	***	RD1/4PS152JL		224,150
ĸ	613	RD1/4PS272JL		02M10L2
R	651	RD1/4PM103,J		70M16LS
		RD1/4PS473JL	C 564 CEA22	22M16L2
	~~~	RD1/4PS822JL		
	660	RS1/10S104,J		
R	661	RD1/4PS223JL		

RS1/10S334,J

RD1/4PS334JL

RD1/4PS272JL

RS1/8S272J

* D 607

* D 651 653 654 655 656

C 565 C 612 4.7 μF/16V C 614 C 615 C 617 C 651 C 652 C 654 C 656	CQMA154,J50 CCH1005 CEA010M50LS2 CEA221M10L2 CEA101M50L2 CEA100M16LS CEA330M16LS CEA470M16LS CEA470M16LS	Mark ===== Circuit Symbol & No. ==== Part Name Part No. * D 1 (KE-4343) F1SR35- ** S 1 2 Switch(Mute, Motor) ESN1001 ** S 3 Switch HSK-126 Unit Number: Unit Name : P.C.Board Unit	-100A 1 6
nit Number:		Mark ====== Circuit Symbol & No. ==== Part Name Part No	
nit Name : MS Unit(KE-4343)		** S 1 Switch(FWD/REV) ESH1001	1
SCELLANEOUS		Miscellaneous Parts List	
ark ====== Circuit Symbol & No. ==== Part Name	Part No.	Mark ====== Circuit Symbol & No. ==== Part Name Part No	o.
* IC 401 * Q 401 * Q 402 * D 401	PA0011 2SC3311A (2SC2458) DTC124ES RD9R1ESB3 (MTZ9R1,JC)	** HD 1 Head EPB100 ** M 1 Motor Unit EXA101: * S0 1(KE-4343) Solenoid EXP100	3
ESISTORS			
ark ====== Circuit Symbol & No. ==== Part Name	Part No.		
R 401 402 403 R 404 R 405 R 406 R 408	RD1/4PS103JL RD1/4PS224JL RD1/4PS104JL RD1/4PS273JL RD1/4PS472JL		
R 409	RD1/4PS271JL		
PACITORS			
ark ===== Circuit Symbol & No. ==== Part Name	Part No.		
C 401 402 C 403 C 404 406 C 405 C 407	CGCYX103K25 CGCYX392K25 CEA010M50LL CEA1R5M50LL CEA220M10LL		
C 408 C 409	CEA4R7M35LL CEA100M16LL		
nit Number: nit Name : Key Board Unit			
rk ====== Circuit Symbol & No. ==== Part Name	Part No.		
* IL 901 902 903	CEL1025 SLR-320PG3KL SLR-320VR3FKL CWW1054		

17. PACKING METHOD

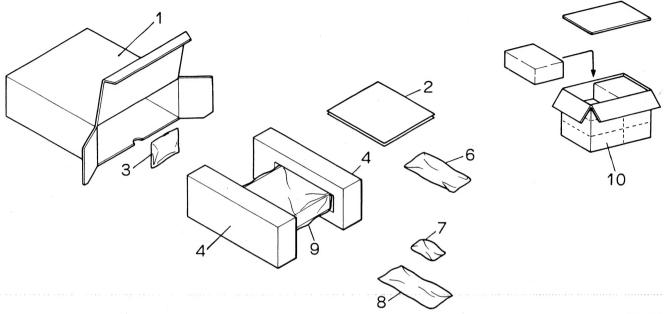


Fig. 14

● Parts List

Mark	No.	Part No.	Description Mark	No.	Part No.	Description
	$\overline{1}$	CHG1409	Carton (KE-4343)	6-2	CNG-633	Plate
		CHG1428	Carton(KE-3525)	7	CDE1769	Cord Assy
		CHG1412	Carton(KE-3333)			(KE-4343, 3525, 3333)
		CHG1413	Carton (KE-2323)		CDE1770	Cord Assy (KE-2323)
				8	CEA1313	Accessory Assy
	2	CRD1174	Owner's Manual			
			(KE-4343, 3333, 2323)	8-1	CDE1289	Cord
		CRB1107	Owner's Manual (KE-3525)	8-2	CNF-111	Strap
			Card	8-3	CNV-769	Washer
			Caution Card	8-4	CEA-215	Screw Kit
				8-4-1	WS40FMC	Washer
	3	CXA1969	Knob Assy (KE-4343, 3333)			
		CXA1979	Knob Assy (KE-3525)	8-4-2	NF40FMC	Nut
		CXA1970	Knob Assy (KE-2323)	8-4-3	NF50FMC	Nut
*	3-1	CAA1011	Knob (KE-4343, 3525, 3333)	8-4-4	CBA-028	Screw
*		CAA1109	Knob (KE-2323)	8-4-5	CBN-028	Nut
				8-4-6	CND-646	Spacer
*	3-2	CAA1054	Knob			
* *	3-3	CAA1113	Knob (KE-4343, 3333, 2323)	8-4-7	PMB50Y160FMC	Screw
*		CAA1122	Knob (KE-3525)	9	CEG-215	Polyethylene Bag
	3-4	CNK-292	Cap	10	CHL1409	Contain Box (KE-4343)
	4	CHP1064	Styrofoam		CHL1428	Contain Box (KE-3525)
					CHL1412	Contain Box (KE-3333)
	5	• • • • •			CHL1413	Contain Box (KE-2323)
	6	CXA1968	Panel Assy			
			(KE-4343, 3525, 3333)			
		CXA1975	Panel Assy (KE-2323)			
: i	6-1		Panel (KE-4343, 3525, 3333)			
,			Pane1 (KE-2323)			